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AUT protests to Lord Scarman over medical cuts
Sitting prepares new academic plan for the 1980s
British Psychological Society conference: full report

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Review of 1981

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Next Week

Northern Ireland on the brink of change
Students and terrorism
Edward Speirs on nuclear weapons

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A Mephistophelian bargain

The greatest danger for the universities that lurks in Sir Keith Joseph's "restructuring" package is that the modest alleviation of their financial difficulties which it promises may be just enough to persuade them to accept the unacceptable, the run-down of the university system.

Of course, £50m of "new" money next year and a still undisclosed amount the following year, plus any contingency money the University Grants Committee can scrape together out of the entirely inadequate recurrent grant, fall far short of what is needed to ensure an orderly and civilized run-down of the universities. The total package over the two years may add up to more than £100m but this sum must be compared with the more than £250m which the vice chancellors have estimated will be needed to meet the likely cost of the inevitable redundancies. Yet it is just possible to see how this money might be just enough to enable the system to "muddle through" without a significant number of compulsory redundancies (but with, of course, significant academic damage as random and uncontrollable distortions occur).

The natural inclination of many vice chancellors to avoid radical surgery will be reinforced. Senates and courts will now be more likely to devise and to approve economy packages that deliberately exclude the compulsory redundancy of university teachers (not, of course, of researchers on short-term contracts or of non-academic staff). In most universities the sums will just about add up. Even the UGC may decide to retreat a little from its present highly exposed position and soften the edges of its selectivity strategy by doing a bit more for the Salfords and Astons. After all, that is what the money is meant for if "restructuring" has any meaning at all. So even in the most hard pressed universities the sums with a bit of juggling may be made to add up.

If this happens, the vice chancellors and the AUT will have won something - but the Government will have won more. For the university authorities the prospect of financial chaos and the break-up of any academic community under the impact of extraordinary economy measures will have receded. For the AUT the prospect of tenured lecturers being sacked, and as a consequence of hazardous legal actions to defend them, will also have receded.

Neither gain is at all negligible. It is difficult to see how, if there had been no alleviation, perhaps six to ten

universities could have survived in any recognizable form - which is no doubt why even this doctrinaire Government was prepared to make some small concession. Equally, for those two or three thousand university lecturers who would have been sacked the gain is an absolute one. Yet for both the vice chancellors and the AUT a great deal will still have been lost. Universities will find it virtually impossible to make new appointments; departments will be subject to random attrition; expenditure on all non-academic staff items will be even more severely squeezed. The AUT may be able to protect the tenured (although older teachers may become subject to considerable pressure to take premature retirement) but no new permanent academic appointments will be made and researchers and part-timers may become an endangered or even extinct species of academic.

Worst of all, it will make it easier to achieve the run-down of the university system - which is why the Government is the real winner. For the intention of Sir Keith's "restructuring" package is clear: it is to smooth the path of contraction by removing the more difficult political obstacles on the way, like unacceptable financial chaos in some universities or legal difficulties over tenure. Sir Keith knows, more clearly perhaps than those who oppose his policy within the universities, that angry deputations of vice chancellors are much less likely about the denial of future opportunity than the chaos of present cuts, and that if a significant number of unambiguously compulsory redundancies can be avoided the AUT is unlikely to do much about the erosion of the academic profession in the future (although why he should worry about such AUT action when it includes block-busters like disrupting UGC visitations is unclear).

Sir Keith is offering the universities a Mephistophelian bargain: accept that the run-down of the university system is inevitable and I shall give you some temporary help to achieve this run-down without too much pain. It is a bargain that in one sense cannot be refused because to do so would be to accept the inevitability of chaos and redundancy. But in another more important sense the bargain must be refused. The money can hardly be returned but the policy must be rejected. For the present attack on higher education is directed as much, or perhaps more, at future teachers, students, opportunities as it is at present ones.

At a press conference on the new

Recognizing the APT

The twin facts that the decision took seven months to take and then was announced three days before Christmas are a clear indication of just how much opposition there has been to Mr Carlisle's proposal in the summer that the Association of Polytechnic Teachers should be given a place on the Burnham further education committee. Quite clearly the local authorities, the employers, all and civil servants in the Department of Education and Science tried to take the politicians out of the loop. That it has taken so long for political forces to prevail shows that they talked very loud and very long.

Now that a decision to give the APT a place on the committee has been taken there is little point in spending much time emphasizing the contrary arguments. It was a decision

taken on political grounds without reference to the demands of public administration. Its effect can only be to introduce us to the Burnham FE committee, the rancour, divisiveness, a petty point-scoring that has so often reduced the schools committee to immobility. But this must have been known and the risk accepted when the decision was taken.

However, the APT decision does raise the larger question of why we have statutory negotiation machinery for teachers at all. The APT presumably is mainly interested in membership of the Burnham committee not because of the influence the association can hope to wield on the committee (the teachers' panel will still be dominated by NUTs) but because it grants the APT a responsibility that will be useful in gaining greater recognition. NUTs for its

measures Sir Keith made an interesting remark. He said that higher education was being cut while schools were being (relatively) spared partly because higher education was excellent already while schools were capable of considerable improvement. It would be wrong to dismiss this as an example of nutty logic. For what he is really saying is that higher education's "excellence" (ie commitment to the intellectual preoccupations of a socially and politically exclusive elite) must not be diluted, indeed must be further refined through contraction.

This ideology, the repudiation that it contains of Robbins, Crosland, and a generation or more of efforts to develop more liberal and more popular forms of university and higher education, are a greater threat to the universities than those of financial chaos or of compulsory redundancies. It is a threat to their self-interest because acceptance of a narrower role is bound to lead eventually to more restricted resources. It is a threat to their altruism because a higher education system not dedicated to liberal purposes in a democratic society is a dangerous anachronism. It is revealing that the present Government's financial attack on higher education has been slightly reduced so that the ideological attack can be pressed home more surely. Under Mr Carlisle it was possible to say with honesty that the Government's higher education policy was entirely led by public expenditure. Under Sir Keith ideology has come back.

If this assessment is correct, then the vice chancellors and the AUT must consider very carefully which are the most appropriate tactics for effective resistance. So long as the enemy was a pragmatic one (the country cannot afford the present higher education system), pragmatic arguments about the dissonance of too rapid a contraction were fine. Now that the enemy is an ideological one ("the country does not need so much higher education"), more ideological arguments must be deployed against it. This will not be easy. Some of the pragmatic arguments about dissonance may actually conflict with the more ideological arguments which must be about wider access in social terms and greater diversity in academic terms. But universities cannot hope to fight the new war with the weapons and tactics of the last one. So the attempt must be made despite the difficulty to build a broad coalition in favour of higher education rather than to rely on the crowd of sectional interests.

Certainly, one hopes... You're a good sort, Vice Chancellor. A damn good sort. One of the best. And do you know what? Do you know what?

No, I'm afraid you have the advantage over me there. I'm going to stick by you in the years to come. Stick by you. Just like I did when there were storm clouds all around. I'll be there to lend support. Lend support. Know what I mean?

Indeed. Happy New Year Vice Chancellor. Happy New Year. Do you know what? I'm going to have another drink with you. But this time it's a drink to the future. A drink to the future.

Thank you. Thank you. A red wine would be splendid. And do mind how you go. Ah, Burnam. Yes, Vice Chancellor. One little task for the first working day of the New Year. Yes sir? Get out the Involuntary List will you and underline Podmore's name. Twice. Know what I mean? Yes indeed sir. Happy New Year. And you Bursar!

Laurie Taylor



Happy New Year, Vice Chancellor! And you Dr Podmore. Your very good health. And yours Vice Chancellor. And yours.

Thank you Podmore. Vice Chancellor, may I tell you something? Please speak frankly, Podmore. That's what occasions like this are for.

Well what I want to say, sir, is slightly on the personal side. You see, 1981 was a difficult year for everyone, a year of doubt and uncertainty, and I know a few unkind words were said in the heat of the moment. Unkind words. Know what I mean? I think so, Dr Podmore. But there's now need to... And quite honestly one or two of my colleagues came to the conclusion that you were a bit devious - and if I may say so - rather surly with it. Know what I mean?

Well, I hope... But I said to them - and I'm speaking quite frankly now. Of course. I said, "Look, say what you like about him, say he's devious, say he's surly, say he doesn't know his arse from his elbow, but he's only doing his job. Doing what he's paid for. And don't forget that. We all make mistakes sometimes. Bloody big mistakes. Know what I mean?"

Yes, I think so. I said to them, "What's the point of people like you going around accusing him of plotting and scheming when all he's doing is looking for the best way to reduce the staff by 22 per cent?" What's the point indeed? I said to them: "He's a good man. No doubt about it. You can trust him."

That's very touching Podmore. And now of course we can smile again, can't we Vice Chancellor? Go forward to 1982 with hope in our hearts. You're referring to the recent Government concessions? Well, yes, let's hope it's good news. Although... Forget the dark days - the months of doubt and recrimination and paranoia.

Certainly, one hopes... You're a good sort, Vice Chancellor. A damn good sort. One of the best. And do you know what? Do you know what?

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The Times Higher Education Supplement

Extra £100m will not save jobs

by Ngaio Crequer
The Government is likely to provide a further £50m for restructuring in the universities for 1983-4, on top of the £50m announced last month for 1982-3.

But the crucial factor, which will affect the number of redundancies, will be the view the Government takes on the national compensation scheme for lecturers put forward by vice-chancellors. An announcement is expected in the next week or two and it is understood that, although proposals for older staff are acceptable, the Government thinks the scheme is far too generous to younger people.

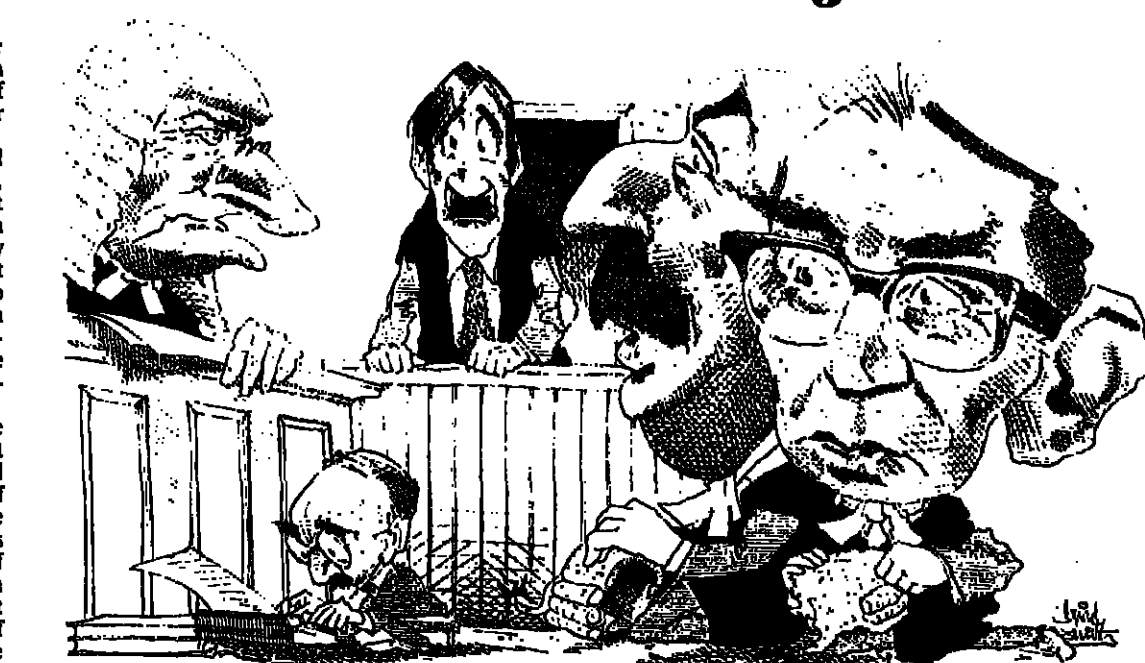
The University Grants Committee is now convinced that an early test case on tenure is both desirable and inevitable, to give some indication of the amount of money that may have to be forthcoming. It may get its way. On Monday the Association of University Teachers is to apply for a High Court injunction to prevent London University's Institute of Orthopaedics making three academics compulsorily redundant.

Despite the apparent growth in the amount of money being made available for restructuring, that is redundancies and new developments - three sums of £20m and two amounts of £50m - neither the UGC nor the universities are prepared to revise earlier figures of 3,000 job losses among academics and 4,000 among non-academics.

Sir Keith Joseph, Secretary of State for education, told the North of England Education Conference this week: "The universities will need to shed staff at much the same rate as public sector higher education. As I made clear in my statement on public expenditure just before Christmas, the contraction of higher education already planned needs to go ahead."

"I acknowledge that the transition will present its difficulties, but we have to get down to and hold, lower continuing levels of expenditure."

Mr Laurie Sapper, general secretary of the AUT, said this week he



would ask the UGC to distribute the £16m (announced last month to take account of changes in costs for 1981-2) to the hardest-hit universities.

"We also want discussions as to how best the £50m can be used for a national voluntary severance scheme and we have asked the Committee of Vice-Chancellors and Principals to negotiate with us."

"If they say that this will lead to staff leaving on a random basis, we are willing to discuss a national redeployment scheme for the universities as a whole."

Between now and the middle of February the UGC will expect to have seen about half the universities, those who came off worst in the July allocations, to discuss the academic plans they are now drawing up. It is likely that the committee will be prepared to accept small modifications, but nothing dramatic.

Then the committee will begin to decide how the restructuring money of the AUT, said this week he

late principles for the 1982-83 distribution of recurrent grant, which it will probably announce in late spring. It will then have a sound idea of how many staff will have to be shed and over what time scale. Some universities, including Salford, have stressed again the advantages of spreading the cuts over five years, and Sir Keith admitted that in one or two special cases, this would be possible.

The University of Manchester Institute of Science and Technology has given statutory notice to the Department of Employment that at worst there could be up to 360 job losses, including 130 academic and academic-related, 50 technical, 30 clerical and 110 manual.

But in a letter to staff, the principal, Professor Robert Hazeldine, said that despite the financial position, there was no question of compulsory redundancy in the immediate future and no change in the expressed policy of exploring every avenue of natu-

ral wastage and voluntary schemes. The UMIST council passed a resolution confirming support for the procedures followed by the principal. Unions are maintaining their opposition to guidelines for early retirement and compulsory redundancy compensation issued by London University.

The formula for severance pay says that two weeks' pay should be given for each year of service below 41, and an additional week's pay per year for staff aged 41 and over.

The AUT has also warned members at London University that any information supplied to the subject review committees should be wholly accurate and complete. "If the information which has been submitted is subsequently used in any way to effect the employment of individual members of staff, the provider of the information could render himself or herself liable to legal action if the information is inaccurate or contains relevant omissions."

Treasury backs hard line on SSRC

by Paul Flather
The Treasury has put its weight behind the now unmistakable intentions of Sir Keith Joseph, Secretary of State for Education, to curtail severely the activities of the Social Science Research Council in favour of increased support for natural sciences.

An exchange of confidential letters between Sir Keith and Sir Geoffrey Howe Chancellor of the Exchequer, reveal clearly the Government's plans to try to wind down the scope and scale of SSRC work perhaps as a prelude to abolishing it altogether.

In his letter dated December 10 and circulated to all senior Cabinet ministers, Sir Keith said he had invited Lord Rothschild to review the work of the SSRC "if possible within three months" and to provide the Government "with an effective basis for action."

"The report must hold water, in both its practical and philosophical parts, if it is to provide us with an effective basis for action - possibly action opposed by articulate and influential sectors of academic and political opinion," he said.

The letters, first obtained by New Society, reveal the extent of Sir Keith's plans. Expanding on the official terms of reference of the review, he asked Lord Rothschild to consid-

er whether in the light of his report "there would be a continuing justification for the council's existence."

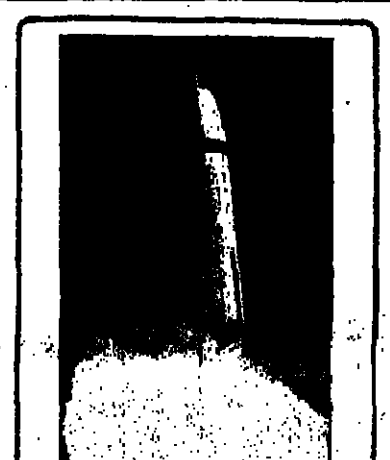
"I feel confident about the quality of the conclusion which would emerge, and the presentational advantages of proceeding with a tried and respected operator are apparent," Sir Keith told the Chancellor.

Sir Geoffrey, in his reply dated December 16, welcomed Sir Keith's plans, and confirmed that he and his Treasury colleagues had already expressed doubts about the value of some of the SSRC's activities to Sir Keith's predecessor, Mr Mark Carlsile.

Sir Geoffrey agrees that Lord Rothschild should be asked to report fairly quickly. "I was indeed intended to hear of your intention to give greater priority to the natural sciences within the research councils field. This has my strong support."

Mr Posner was this week still remarkably optimistic. "The SSRC is proud of the work of British social scientists and of their international reputation," he said.

"There is no doubt that the independent support of social science research must be carried out in this country as in all civilized countries without political interference."



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Putting policy into the SSRC, 10

Student union outlawed in Poland

Poland's Independent Students Association (NZS), formally suspended since the imposition martial law, has now been closed by the authorities. The announcement followed a three week campaign of savage propaganda against NZS leaders for allegedly trying to politicize the organization at the instigation of "anti-socialist" and "extremist" elements at home and abroad.

The announcement came shortly after a high-level meeting on "educational problems" between Party leaders, provincial party secretaries, the Minister of Education, Bohuslaw Faron and the acting head of the Ministry of Science, Higher Education and Technology, Mr Mieczyslaw Kazmierczuk. (The minister, Dr Jerzy Nawrocki, resigned shortly after the military takeover).

Polish universities resumed work this week, but only for final year undergraduate and postgraduate students. All other courses are closed until September, leaving the students' legal position very doubtful.

According to a decree of the Military Council of National Salvation dated December 30, all able-bodied males aged between 18 and 45 have to report for compulsory work, and continued on page 3

BEd degree makes a recovery

by Patricia Santinelli
The ailing BEd degree seems set to make a healthy recovery, according to the latest figures for applications which indicate a rise of seven per cent on last year.

The Central Register and Clearing House regards such an increase at this early stage as a definite sign that the fall in recruitment which meant institutions met only 60 per cent of their targets in 1980, will end in 1982.

Signs that the downward spiral was ending were confirmed at the end of 1981 when the Standing Conference of Principals and Directors of Colleges and Institutes of Higher Education's survey of 60 institutions showed that admissions for 1981 had recovered to meet 77 per cent of their quota.

The clearing house believes that the rise in applications is partly due to competition for the PGCE which is becoming increasingly oversubscribed, and partly to the growing awareness that students entering courses in 1982 will qualify in 1985/86 when posts in the primary sector will increase.

Recent surveys show that BEd honours graduates fare as well if not better than postgraduates in obtaining teaching posts. The latest survey published this week by the Standing Conference covering some 38 institutions and returns from some 6,500 students shows that fewer BEd honours failed to obtain posts than did PGCE trained students.

More than half of those who were unemployed and were prepared through the PGCE course were seeking posts in secondary schools.

Significantly, among those students who were unemployed and trained to teach in the secondary sector, PGCE students in mathematics, biological sciences, English and drama, history, geography and social sciences represented a much higher proportion than the unemployed who had qualified through both BEd routes.

Another development which may help to restore confidence in the BEd is that in spite of the inclusion of a paragraph in the Secretary of State's letter saying that BEd recruitment should be held to 1980-81 levels, the Department of Education and Science does not plan to penalise institutions which go beyond their previous figures.

Setback for creationists

WASHINGTON
The influential creationist movement in the United States suffered a major setback this week when a district judge ruled that the biblical account of the origin of life was religion and could not be taught as science in schools.

Judge William Overton said that an Arkansas statute compelling teachers to give equal time to the theories of evolution and divine creation violated the First Amendment.

The verdict, which followed a spectacular trial in Little Rock, Arkansas, coincided with a new attack on creationism by the American Association for the Advancement of Science, which is holding its annual meeting in Washington. A resolution adopted at the meeting, the world's biggest gathering of scientists from all disciplines, said that "creationist science" had no scientific validity.

Opportunity knocks for few

The Robbins principle of open access to higher education should be maintained into the 1990s, but adapted by bringing market forces into play, Dr Oliver Fulton, a research fellow at Lancaster University, told a London conference this week.

Students should be allowed more power to influence higher education policy he said at the conference on demand and access to higher education at the London University Institute of Education.

It would be wrong or inexcusable if people willing or able to participate in higher education were denied access but this did not imply a blank cheque from the Government, he said.

The conference sponsored by the Society for Research into Higher Education was a follow-up to a seminar last year which formed part of the Leverhulme inquiry into the future of higher education.

"It is plain foolish to run down the investment which we have made in the last 15 or 20 years when latent

demand exists and will do right through to the end of the century," said Dr Fulton.

The system needed to be built up. The low level of participation in Britain was "a sign of social ill-health", he said.

The only way higher education would adapt was by the increased use of market forces. "This means giving more power to students to influence higher education and less power to Government," he said.

Dr Fulton based his remarks on nine policy recommendations in *Access to Higher Education* published as background material to the conference.

The recommendations urge higher education institutions to adapt to more students, and run courses for all those who can benefit from them and wish to do so.

They also call for positive discrimination, the recruitment of adult entrants, the awarding of certificates for the partial completion of degrees, and the reservation of at least a

quarter of all places for students not coming in through the traditional A level route.

Entry criteria should include aptitude tests. O level and CSE grades, assessment of prior learning and personal learning contracts.

The grant system should be replaced with a system of "educational entitlement" to which every citizen is entitled for education or training, supplemented by state supported loans for further education or training.

Dr Fulton went on to attack Government policies and said decisions such as the halving of undergraduate student fees only increased central power. "This is the kind of move that will prevent higher education from adapting in the ways it needs to adapt."

Access to Higher Education, edited by Oliver Fulton price £4.95, from Society for Research into Higher Education, the University, Guildford, Surrey.

Leader, back page

Poly union awaits Burnham invitation

by David Jobbins

Leaders of the newly-recognized Association of Polytechnic Teachers are awaiting notification of the first Burnham meeting of the 1982 pay round later this month.

The Burnham further education committee, now enlarged to include one APT representative, has been scheduled for January 29. Dr Tony Pointon, APT's national secretary and the non-TUC union's probable representative on the teachers' panel, said this week no invitation has yet been received. "We do expect to be invited otherwise the meeting will not be valid under the Remuneration of Teachers Act," he said.

But representatives of the management side will be meeting the National Association of Teachers in Further and Higher Education to hear their views before inviting APT.

And it was clear that APT would not be asked to attend Monday's session of the salaries working group which has been reviewing the overall pay structure.

Dr Pointon confirmed he would be taking advice on the legality of excluding APT from the review group discussions, when the two sides are to discuss the findings of a survey of further education lecturers' career structure.

Membership of the review group was determined as part of last year's pay settlement, while the issue of APT representation remained undecided.

APT has also effectively been excluded from any involvement in drawing up this year's pay claim, which was accelerated to fit in with the TUC initiative on public sector pay.

The Natfhe executive meets next week to finalize its response to APT's recognition. Some union leaders are expected to argue against Natfhe's policy of withdrawal from Burnham, regarding the issues as a *fait accompli*. Others are likely to maintain that some gesture should be made at the January 27 meeting.

They are also likely to discuss how to respond to any management offer which may be made at that meeting. First indications of the employers' attitude will be disclosed when Burnham primary and secondary meet in just over a week's time. They are expected to offer no more than the 4 per cent which the Government has allowed for public sector pay rises in setting cash limits for next year.

The lecturers are to claim 12 per cent, a flat rate payment of £250 to help narrow differentials, and structural demands referred to the review group.

News in brief

L.e.a.s told how to spend money

Local education authorities have been advised to spend almost a quarter of their allocation for capital projects on further and higher education, it was announced this week. The Department of Education and Science has set a limit of £292.3m on capital spending, allocating £72,320,000 to further and higher education projects.

Although the DES has no power to instruct local authorities on how to spend the money, it is the second year in which the department has itemized recommended allocations. Authorities have been urged to give priority to nursery and special education building although schools naturally take the lion's share of the proposed allocation.

A new school of education comprising two divisions dealing with first degree and advanced courses as well as educational development has been set up at Roehampton Institute of Higher Education.

The school's 50 members of staff will be jointly headed by Mr Jim Docketing and Dr Roy Evans. Its courses will be validated by the University of Surrey, leading to the BEd and BEd (Hons) degree, the Postgraduate Certificate of Education and a BA degree with education as one of its components.

Researchers at Birmingham University are trying to develop a new type of anti-allergy drug to control asthma and hay-fever. The Medical Research Council has awarded £74,000 to Dr D. R. Stanworth of the Rheumatology and Allergy research group in the university's department of immunology.

The research is aimed at artificially producing a sensitizing antibody molecule responsible for mediating the allergy in humans, which would create an effective prototype.

Allergy control

Former law graduates of the University College of Wales, Aberystwyth, including former Cabinet ministers, Members of Parliament, judges, academics, barristers and solicitors have contributed to the special fund set up to commemorate the work of Professor Llewellyn Davies, head of the department from 1940 to 1970, who died in April. Contributions have also come from judges in Malaysia and Nigeria and professors of law in Tasmania and New York. More than £1,000 has been collected in a few months.

Contributions can be sent to the law department. They will be used for the benefit of the department and to establish prizes in memory of Professor Davies.

In Memoriam

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Huddersfield staff angered by council order

by David Jobbins

The long-running conflict between Huddersfield Polytechnic and Kirklees Council took a new turn this week when senior administrative staff called for the intervention of Sir Keith Joseph, Secretary of State of Education.

They are angered that the local authority-dominated governors have ordered a joint council representing all non-teaching staff at the polytechnic to be wound up. A works council based on trade union representation is to replace it.

The joint council had passed a resolution of no confidence in the governors over the treatment of the polytechnic's director of academic support services, Mr Peter Fielden.

Mr Fielden resigned following appointment of a new chief administrator with duties allegedly duplicating his own.

"In view of what has happened to a very senior member of staff, a large number of people are very concerned," Mr Adam Pleasance, secretary of the now defunct joint council said.

The letter to Sir Keith has been signed by the polytechnic's personnel officer, accommodation officer, head caretaker, and nurse among others. It asks Sir Keith to use his powers under Section 68 of the 1944 Education Act to intervene where local education authority or governors have acted unreasonably.

Just two years ago Kirklees council itself called on the then Secretary of state, Mr Mark Carlisle, to allow its officers to take over day-to-day running of the polytechnic.

Mr Fielden says he has been stripped of status, authority and responsibilities by the governors. He joined the staff four years ago, effectively as number two in the administrative hierarchy to the rector, Mr Kenneth Durrands.

In December 1980 he was accused of obstructing governors by locking the door of a room where a subcommittee was due to meet. The key was found and the door opened within ten minutes, but Mr Fielden was barred from governors' meetings pending an investigation. It was not until October last year that governors decided there was no evidence he had acted improperly.

Joseph wants to bury the hatchet

by Charlotte Barry

Sir Keith Joseph, Secretary of State for Education, this week appealed to critics of the new national body for polytechnics and colleges to bury the hatchet and make the system work.

Speaking at the North of England Education Conference in Leeds, Sir Keith said: "To those in the polytechnics and other institutions of higher education who have expressed honest doubts about the shape of the organization proposed I can only say work in it and make it succeed on your own terms."

The committee would be left to devise its own ways of working, he said, but central and local government would "think hard about its priorities and immediate objectives." The aim was to produce a smaller, but even better system of higher education.

Although Sir Keith's speech was mainly concerned with schools and the less academically able, he placed special importance on the work of the further education sector, which would have a vital role to play in the New Training Initiative.

Mr Barry Taylor, chief education officer of Somerset, earlier called for the creation of a single government department of education and training, as well as local education and training authorities.

He also recommended a national awards council to rationalize all examinations and a council for curriculum to embrace bodies like the Schools Council and the Further Education Unit. He said that local education authorities must learn to respond far more quickly to demand.

Young people must be resilient enough to face up to unemployment and compete with others in search of work. Sir Richard O'Brien the chairman of the Manpower Services Commission told the conference.

Trainers must understand that job training on its own could not prepare school leavers for an uncertain future. They must teach them how to adapt to technological and market changes as well as a basic skill, he said.

"Too often, we treat it as an optional extra, and not as a factor in production and productivity which requires constant attention and investment if we are able to compete successfully in the future," he said.

Sir Richard accepted criticism of MSC schemes from local authority representatives at the conference. He conceded there were some brilliant schemes, and also some "terrible" schemes. He said he intended to get rid of the latter and raise standards.

Education 'a bore'

Education has become a bore for many people which radio and television could brighten up, the conference heard.

Lady Plowden, former chairman of the Independent Broadcasting Authority, said broadcasters were still failing to capitalize on people's capacity to learn from television and radio. Producers, directors and managers should be fulfilling their educational responsibilities by seeking out contacts and advice outside the narrow world of broadcasting.

A one-sided partnership exists between broadcasters and educators she said. "On the whole the broadcasters—even the educational ones—in their rather isolated world see themselves as the main initiators of programmes and would only on rare occasions wish to be thought of as supporting someone else's idea."

All those outside broadcasting who were interested in education whether at home, school, college or in industry and commerce should help broadcasters on all channels.

Lady Plowden who is president of the National Institute of Adult Education, said: "If the best of education is to be made available to all of us there must be a real dialogue and partnership as between equals between the broadcasters and between the educational institutions who can both support and promote the broadcasts."

The divided nation

The traditional links between Oxbridge, public schools and the major professions continue to make for a privileged elite. Dr Richard Hoggart, warden of Goldsmiths College, London told the conference.

"Those links are no weaker now than they ever were and in some respects they are stronger," he said. Although successive governments had poured billions of pounds into education, particularly higher education, Britain was still a divided nation.

Dr Hoggart criticized all universities for failing to improve class representation and spread among students. Nor had provision for women and part-time education expanded as much as in other countries in Europe and North America, he said.

It was possible that fear of falling rolls in universities would encourage them to open their doors to part-timers, Dr Hoggart said. But they might turn inwards, close their doors and just become research institutions. Dr Hoggart, who is chairman of the Advisory Council for Adult and Continuing Education, warned that educators should not concentrate solely on the needs of young people but also on continuing education. "This is being done inadequately and must be done better throughout the 1980s" he said.

Police studies should be established as a distinct branch of government worthy of serious study and research in academic institutions, Mr John Alderson the retiring chief constable of Devon and Cornwall said this week.

Mr Alderson, who has made his name promoting community policing methods, is to take up a fellowship at Corpus Christi College, and the Institute of Criminology, at Cambridge during the summer term. He will lecture, contribute to seminars, and do private research.

Mr Alderson said that he hoped some academic institution might set up a centre for police studies where specialist research can be carried out. "Policing is an important area of government which has been neglected by academics," he said.

Other important branches of government such as the military, education, the church, and the law all have their specialist literature. But we just don't have that kind of thing for the police."

Mr Alderson has just announced that he will be retiring five years early in April. He plans to work on a follow-up to his book, *Policing Freedom*, published in 1979.

He believes policing in Britain is facing one of its periodic watersheds after last year's riots and the Scarman report. It has to accommodate a greater appetite for democratic control, greater social and sexual freedoms, and the wider impact of higher education on a questioning society.

He said policing had changed greatly down the ages from King Alfred's idea of keeping peace by collective cooperation, to the city watchmen of medieval times, then the creation of JPs, and in 1829 Peel's establishment of the London Metropolitan force.

"My fellowship will give me an opportunity to clarify my thinking on some of the police procedures. To judge from their names, the participants were selected on a basis of political orthodoxy or of non-involvement in the campaigns for academic freedom in recent months.

Although there are now attempts to introduce the new political "verification" procedures into the universities, it is unlikely that the academics will take lightly the suppression of the NZS. Just before the military takeover, the Conference of University Rectors, meeting in Poznan, had warmly commended the NZS protests, which had said the rectors, contributed greatly to the campaign for academic autonomy.

There are reports of lecturers, and in the case of the Catholic University of Lublin, chaplains, joining their students in protests against martial law. According to one such report, the dean of mathematics of Wrocław University is said to have been killed defending his students. (Since there are two universities in Wrocław, it has been impossible to confirm the name of the victim).

New career
M.J.K. Hudson, director of Durham University Careers Advisory Service has taken over as chairman of the Association of Graduate Careers Advisory Services. He will serve for two years.

The chairman of governors, Kirklees education committee chairman Mr John Mearugh, declined to comment.

In December 1980 he was accused of obstructing governors by locking the door of a room where a subcommittee was due to meet. The key was found and the door opened within ten minutes, but Mr Fielden was barred from governors' meetings pending an investigation. It was not until October last year that governors decided there was no evidence he had acted improperly.

In the meantime Mr Fielden, who was seriously ill and away from work for some six months, twice lodged grievance claims when the new post of chief administrative officer was advertised. The sole applicant on the second occasion was appointed, but his work in September and began his duties confirmed by governors last month. Mr Fielden's grievance that the new official's duties would conflict with his own was never formally heard.

Mr Fielden says he has been stripped of status, authority and responsibilities by the governors. He joined the staff four years ago, effectively as number two in the administrative hierarchy to the rector, Mr Kenneth Durrands.

In view of what has happened to a very senior member of staff, a large number of people are very concerned," Mr Adam Pleasance, secretary of the now defunct joint council said.

The letter to Sir Keith has been signed by the polytechnic's personnel officer, accommodation officer, head caretaker, and nurse among others. It asks Sir Keith to use his powers under Section 68 of the 1944 Education Act to intervene where local education authority or governors have acted unreasonably.

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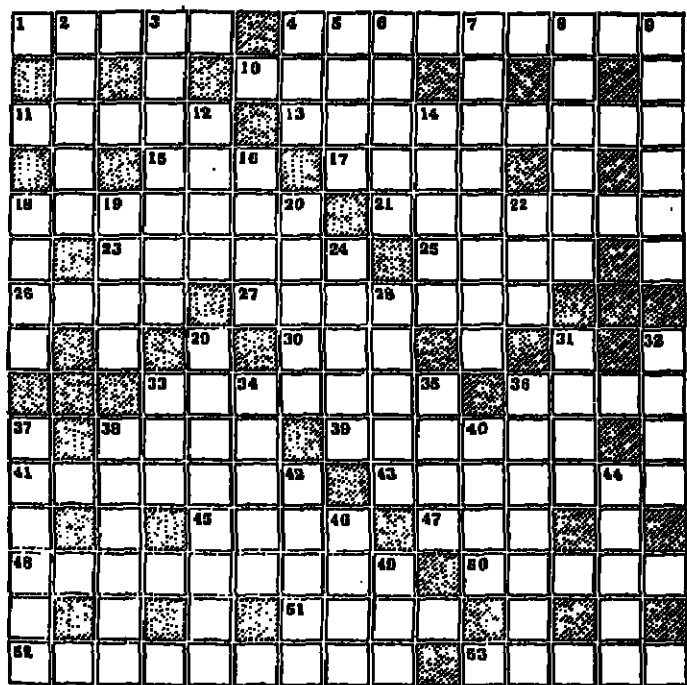
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 - 17 Head of a chapter
 - 21 Decades of the ultimate dish
 - 22 Frequently under observation
 - 23 What's in this stands out
 - 25 Rightly word
 - 26 In the end of this gets to the way the whole may result
 - 27 Retains (name)
- Down
- 2 Hermitic gold between mother and me
 - 3 Out of countenance
 - 4 Upset this value and get a sharp reproof
 - 5 Intently watched
 - 6 In some hands the things become trumpets
 - 7 A religious service
 - 8 This woman has dropped an h
 - 9 Sounds like a curious case
 - 10 The ought to be square
 - 14 Misnomer stoppage
 - 16 Written treaty
 - 18 Chivalry's picturesque scholars carried their sashes on every one
 - 19 Six of 45 acres
 - 20 Precision advantage
 - 22 Parents in a negative way
 - 24 Used to be someone in France
 - 28 Happen afterwards
 - 29 Climbing fastened in mass
 - 31 A terrestrial glider
 - 32 The final crack
 - 33 The little devil's on our money
 - 34 Simplest creature
 - 35 Time measurements
 - 36 Jolly times 4 anyone
 - 37 Ladies in providing mood
 - 38 Presents are commonly this
 - 39 One the best
 - 40 Tail in Scotland may mean team
 - 41 Words, but usually plays
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North American news

ACE fails to win confidence

from Peter David

WASHINGTON

An attempt by the influential American Council on Education to reinforce the confidentiality of academic appointment and promotion decisions has failed to satisfy many university presidents.

A statement adopted by the association was published last week and will be circulated to the 1,600 ACE universities and associations. It reaffirms the importance of academic confidentiality and warns that its erosion could jeopardize the ability of universities to make fair promotion decisions.

But many university presidents believe that the wording of the statement is too weak to counterbalance a tide of litigation in which disappointed academics have charged university committees with sexual or racial discrimination.

In some cases, the courts hearing discrimination allegations have compelled university academics to reveal how and why they voted in particular promotion decisions. The most notorious case resulted in a Georgia University professor going to jail rather than reveal how he voted on a contested tenure decision.

The ACE policy statement says that confidentiality is the best way to

ensure that academics are evaluated candidly and fairly by their colleagues.

"Without the assurance of confidentiality, higher education may risk a revival of appointment and advancement processes that rely primarily on informal conversations and oral evaluations which are a potentially deeply-discriminating means of evaluation," it says.

So dissatisfied with that statement is the AAU that it has begun drafting a separate policy statement of its own. The exact wording will not be finalized for at least a month, but Mr Vaughn said it was likely to be considerably tougher.

The importance of a strong defence of confidentiality by higher education associations has been underlined by evidence that the courts are undecided about the issue.

A United States Court of Appeal last week upheld the jailing of the Georgia University professor and dismissed his claim that academic freedom would be violated if he were compelled to reveal how he had voted in confidence (THES December 4).

A federal district judge in New York, however, recently declared that members of the City University of New York were not obliged to reveal how they had voted in a tenure decision which had led to allegations of race discrimination.

Scientists upset by break with Russia

American scientists have responded with a mixture of scepticism and regret to President Reagan's decision to curtail scientific and technological relations with the Soviet Union.

Academics who led their development said last week that exchanges between the two countries had already been pared to the bone by President Carter after the Russian invasion of Afghanistan two years ago.

They doubted whether President Reagan's new restrictions would inflict serious damage on Russian science but feared that they could destroy the surviving skeletal relations on which a future revival of contacts would have to be based.

President Reagan announced the curtailment as part of a package of diplomatic sanctions designed to punish the Soviet Union for its part in the Polish crisis.

He said that all exchange agreements coming up for renewal in the near future, including the agreements on energy, science and technology, would be allowed to lapse. Other agreements would be "completely reviewed" when they became due for renewal.

For the scientific communities in the two countries, the principal casualty will be the general science and technology agreement drawn up in the early 1970s during a series of meetings between Mr Nixon and Mr Brezhnev.

That agreement, which provided for collaboration in a score of ventures covering physics, metallurgy, computer applications and microbiology, had already been cut by three-quarters in the aftermath of the Afghanistan invasion. It will now end completely.

But a spokesman for the National Science Foundation, which is responsible for administering most of the exchanges, said that the termination of the agreement could damage the United States as much as the Soviet Union.

Since the Afghan crisis, he said, the United States had restricted its collaboration to areas of "clear and

substantive benefit to the United States". In some areas, notably theoretical physics, welding and metal refining, Soviet knowledge was more advanced.

Massachusetts Institute of Technology Professor Nicholas Grant, chairman of the American team and working with Soviet scientists on electrometallurgy and materials, said that both sides would suffer equally.

"Not all parts of the science and technology agreement could say that there was a good balance of give-and-take, but metallurgy was one area where the Soviet were specializing and doing a good job if not complete job," he said.

Mr William Carey, executive director of the American Association for the Advancement of Science and chairman of the team on science policy, said: "I think the president's move is unfortunate because it is important to keep a corridor of talk open at a lower level. If I understand what he has said he has foreclosed any extension or renewal of the agreement. I would have preferred to leave some opening."

Not all participants in the collaboration programs believe that the United States has received a fair return from the bargain, however. The president's move coincided with a fierce attack on Soviet "exploitation" of the agreement by the Department of Defence.

In a letter to Mr Carey, Mr Frank Carlucci, deputy secretary of the Defence Department, claimed that the Soviet Union used scientific exchanges "in a highly orchestrated, centrally directed effort aimed at gathering the technical information required to enhance their military posture".

Ironically, however, much of this alleged haemorrhage of American military secrets will not be affected by President Reagan's latest move. Scholarly exchanges are organized independently of the federal government and will not suffer from the suspension of the official science and technology agreement.

UNAM had also signed an academic exchange pact last year with the University of Warsaw, covering academic, scientific and cultural collaboration.

Mexico adopts worldly outlook

from Bill Zubryn

with the Rochester Institute of Technology for the interchange of professors, students and didactic materials, especially in the areas of graphic arts, photography, and atmospheric, industrial and electronic engineering. The interchange will begin from this month.

UNAM had also signed an academic exchange pact last year with the University of Warsaw, covering academic, scientific and cultural collaboration.

Women still getting unfair deal

by Paul Fletcher

American women are still severely underrepresented in the top echelons of academic and other professional spheres in spite of strong government support during the late 1960s and 1970s, and the position is set to become worse.

In spite of the increasing numbers of women students now entering higher education in the United States, graduation has not brought the longed for improvement in the status of women in the key professions, according to an article in the bulletin on higher education in Europe published last year by UNESCO.

The author, Mrs Nancy Tapper, executive vice-president of the Centre for Social Research in Oakland, California, reveals that there has been little change in the economic status of women in the last 25 years.

She shows that at every level of educational qualification men earn more than women, that women hold less than one per cent of top management, and five per cent of middle management.

These figures contrast sharply with the dramatic increases in the number of women graduates during the 1970s, with 1980 the first year since the war when the number of full-time women students, 5.9m, outnumbered the number of male students, 5.48m.

Mrs Tapper argues that the pattern of male domination has persisted well beyond the time needed by women to catch up in education and experience, and that higher education is therefore not the only key to sharing out economic benefits.

"Women are flocking to colleges and universities in overwhelming numbers," she writes. "If their potential contribution is not to be lost, American society must find innovative ways to integrate women into all levels of the workplace and policy making."

She blamed the prevailing dominance of men on the "old boys' network, on motherhood and family time blocking promotion, and the acceptance of male leadership roles.

Peter David,
North American Editor,
The Times Higher Education Supplement,
National Press Building,
Room 541,
Washington DC 20045.
Telephone: (202) 638 6765

Overseas news

Feminists oppose women's university

from Hasan Akhtar

ISLAMABAD

Pakistan's first all-women university will start functioning from September. Doctor M. Afzal, chairman of the University Grants Commission says that the draft law providing for a women's university has been submitted to the law ministry.

The idea of an exclusive women's university has come largely from the present government's drive to transform Pakistan into an Islamic state rather than from feminists. In fact a number of women leaders have opposed segregation in higher education.

Enlightened sections of public

opinion doubt whether an exclusive women's university will advance the cause of women's education. They believe that there are not enough qualified teachers and staff. Moreover, at a time when the importance of integrating women is being recognized the world over, they ask, would it be sound policy to confine women to second class universities.

Officials however, claim that there has been a strong demand from Muslim orthodox families for a separate women's university. Dr Afzal however explained that with the establishment of a women's university, no ban will be placed on women's entry into co-educational universities in the

country. The existing 20 universities will continue to offer higher education facilities to women along with men.

The plan is to establish the university at Karachi with a woman vice-chancellor. Teaching at post-graduate level will be conducted by the proposed university at affiliated colleges in Karachi, Lahore and Peshawar.

Three colleges of home economics in these cities will be upgraded into university colleges and in the course of time some other colleges teaching science and arts subjects will also be upgraded. Departments of food technology and textile technology in the

Entrance exam system scrutinized

New Zealand's university entrance examinations system, largely unchanged since 1944, is coming under the scrutiny of a working party set up early this year with the backing of the Minister of Education, Mr Merv Wellington.

At issue is the possible formation of a single new authority to coordinate secondary school examinations and the freeing of schools from the constraints imposed on their curricula by the university entrance examinations.

Secondary school students currently sit the School Certificate examinations in the fifth form. It is a national examination controlled by the Department of Education by the School Certificate Examination Board.

The department also controls the issuing of the non-examinable Sixth Form Certificate and the Higher School Certificates awarded to students who complete their seventh form studies satisfactorily.

Overhauling these certificates however are the qualifications controlled by the Universities Entrance Board - a statutory committee headed by the chairman of the University Grants Committee with five UGC appointees, all university professors and five members appointed by the Minister of Education.

Since 1944 most state secondary schools have been able to accredit their students for the university entrance qualification. Last year there were 28,895 entries for the examinations and 52 per cent were accredited with the qualification and thus excluded from sitting the examinations. Of the remaining 13,926 who sat the examinations, 3,075 passed.

As the sixth form is dominated by the university entrance qualification, so at seventh form levels the university bursaries and entrance scholarships examinations set the pace. Also controlled by the University Entrance Board, these examinations enable students to obtain qualifications which will give them higher financial support during their university studies.

Of the total seventh form rolls approximately 2 per cent gain university junior scholarships, 20 per cent win A Bursaries and 30 per cent gain B Bursaries, while the remaining students, at least in their first year of university study, are eligible only for the basic level of Tertiary Study Grant.

Among the proposals being canvassed by the current working party is the shifting of university entrance to the seventh form. At the moment, three-quarters of all students going on to university undertake general form study and the Director General of Education, Mr Bill Renwick, is believed to be sympathetic to the proposal.

Even, however, if the exploratory studies do culminate in a single national school examinations authority the Universities Entrance Board may well remain as the authority for controlling admission standards to the universities, keeping a watching brief over any new schools examinations authority.

New pension scheme encourages mobility

from Geoff Maslen

MELBOURNE

Academics at Australian universities and colleges of advanced education are to get a national superannuation scheme which will enable individuals to move from one campus to another without loss of retirement benefits.

The federal government will provide a special grant of A\$12m over the next two years to get the scheme underway.

The money will ease the financial crisis facing tertiary institutions which have had to meet rapidly growing costs involved with different universities and colleges.

Under the new superannuation scheme, academics will receive a pension or lump sum payout on retirement at age 65 based on 2 per cent of the final salary of each year of service for the first 20 years and 1 per cent each year thereafter.

So, if a professor retires at age 65 on a present salary of A\$43,000 a year after 30 years service, he would expect to receive a pension worth about A\$22,000 a year, or a cash settlement of around A\$220,000. The pension will also be indexed to cost of living increases.

Staff involved in the scheme will pay 7 per cent of their annual salary each year as their contribution and the institution employing them will contribute 14 per cent. The grant from the federal government is to enable universities and colleges not contributing as much as 14 per cent at present to bring their allocation up to this figure.

At present, many of Australia's 19 universities and 80 or so colleges of advanced education operate insurance endowment schemes in which the institution contributes 10 per cent and the employee 5 per cent of his annual salary. The endowment scheme offers a cash settlement only on retirement of two and a half times the individual's final salary.

The proposal was put up by the Australian Vice-Chancellors' Committee and the Federation of Australian University Staff Associations, which have been developing the scheme for three years, but it did not

China spends more on intellect

by John Gardner

China's intellectuals have benefited from increased public spending in the past year. In December 1980, People's Daily, the organ of the Chinese Communist Party, condemned the waste of money on grandiose capital construction projects which could not be utilized effectively because of the lack of skilled manpower, and urged that more should be invested in education.

On December 1 last year, figures were given to the fourth session of the fifth National People's Congress, China's parliament, which indicate that this has been done. According to Wang Bingqian, Minister of Finance, expenditure on culture, education, science, and health amounted to 17,000 million yuan.

These fields accounted for over one-sixth of total expenditure and constitute a rise of 1,470 million yuan on the 1980 figure. Although the minister did not provide individual figures for the four areas concerned, he did state that educational expenditure had risen by 8.1 per cent. For science, (which is largely conducted in institutes run by the Academy of Sciences, a body separate from the Ministry of Education), the rise was 21.3 per cent.

Intellectuals are also benefiting from a renewed attempt to recruit them into the Communist Party, membership of which confers political influence and enhanced status, together with certain official perquisites. In the Cultural Revolution intellectuals were despised by the Leftists then in control, and some extremists even branded them as the "stinking ninth category", adding them to an official list of eight other groups of "bad elements", including counter-revolutionaries, landlords and "rightists". Now, their absence from the ranks of the Party is officially bemoaned.

In November, for example, Tie Ying, the First Party Secretary of Zhejiang in East China, told a conference that of 1,098,000 party members in the province, only 5.6 per cent were intellectuals.

President J. R. Jayewardene, who is also minister of higher education, took this question up with the University Grants Commission on representations made by the Minister of Rural Industrial Development, Mr S. Thondaman, who is also the president of the Ceylon Workers' Congress, the largest trade union of plantation workers of Indian origin, whose children in higher educational institutions he said undergo hardship because they are charged the same high fees as foreign students.

President Jayewardene has said that the UGC has since reviewed the levy of fees from these categories of students "as the practice was having repercussions on Lankan students following courses of study in foreign universities. Some of the foreign universities have required our students to pay tuition fees purely because our higher educational institutions levied fees from foreign students and non-citizens".

The UGC, President Jayewardene has said, has finally decided to exempt all foreign students and non-citizen students following courses for the first degree in Lankan higher educational institutions from tuition, examination and entry fees with effect from January 1 last.

These were also reports in the Japanese press that Japan had become a "dumping ground" for foreign musicians wishing to sell instruments at high prices. One source said that whenever an orchestra from a western country arrived in Japan at least a few members invariably tried to sell their instruments.

Crackdown on student magazine

The Belgrade University magazine *Student* has come under sharp attack for political faults ranging from "utopian views" and the making of "blanket assessments" to "liberalism", "ultra-leftism" and the spreading of "ideological confusion".

A recent meeting between the publishing council of the magazine (representing the university establishment) the editorial board stressed that *Student* is more than an undergraduate magazine, but forms part of the political climate of "Belgrade and beyond". (Nevoisa Dragosavac, president of the publishing council, criticized in particular a "dialogue" published in early December and (ironic in view of later developments) urging a Solidarity-type renewal process in Yugoslavia.

Other articles particularly criticized at this meeting included a demand for a public inquiry into conditions on the Adriatic prison island Goli Otok, a letter to the editor, claiming that the political system is wearing out, and calling on the student masses to "cut short its agony" and a satirical "message to the people", on conditions in the would-be break-away province of Kosovo, which ridiculed the bestowing of Tito's name on the township of Kosovska Mitrovica.

Dragosavac stressed, however, that there was no one on the publishing council who was "against the system". The council, it appears, tried to scale down the problem to the "youthful ambitions" of *Student's* journalists, but warned them that radicalism in certain situations can cause political damage, and that "a surplus of emotions" cannot replace a lack of proper political argument.

The editorial board, however, refused to admit the council's criticisms, and further talks are envisaged. The party organization in the university is, however, demanding "radical changes" in the editorial board.

COLOMBO

All foreign and "non-citizen" students following full-time first degree courses in Sri Lanka have been exempted from entry, tuition and examination fees with retrospective effect from January 1, 1981. "Non-citizens" are students of Indian origin in Sri Lanka whose applications for citizenship have not yet been approved.

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Violin professor accused of fiddling

An internationally known Japanese violinist who is also a professor at the prestigious state-run Tokyo University of Arts has been arrested on charges of accepting bribes.

Yoshio Unno, 45, is alleged to have accepted a violin bow worth 800,000 yen (£1,900) from a musical instruments dealer in exchange for persuading university authorities to buy a violin costing sixteen million yen (£38,000) from the dealer.

The arrest has brought into the open many other cases where musical university professors encouraged students to buy expensive instruments in exchange for rebates from dealers, and also took large amounts of money from students seeking admission to their colleges.

The case came to light in December during investigations of the dealer, Kuniki Kanda, who was believed to have forged many documents of violins he sold, giving an antique

pedigree to many instruments. Kanda is suspected of selling as instruments made by old masters up to 100 low-value violins in the past ten years.

Subsequent investigations by newspapers and by the Tokyo prosecutors' office brought to light other alleged offences by Unno. One newspaper claimed that he had received a total of twenty million yen (£48,000) from Kanda in bribes in recent years, in exchange for encouraging the university or his students to buy the dealer's violins.

The university now believes that some of the "antique" instruments it bought from Kanda were in fact modern reproductions.

Olga Wojtas talks to Stirling University's new principal, Sir Kenneth Alexander

Confident in the face of adversity

Stirling University was established in 1967 as Scotland's first university on the Robbins model. It did not have the traditional rigid divisions of faculties, thus allowing a broad field of study, and it offered entry to mature students without paper qualifications.

It set out with the highest ideals and aspirations, and was given every encouragement to do so. But it suffered from the inherent Scottish conservatism beyond its campus which ruled that it would be treated warily until it had proved itself by its results over a decade or so. Then in 1972 its reputation was badly damaged by gross media over-dramatization of the incidents at the time of the Queen's visit, the results of the poor internal relations which obtained at that time.

The debacle cut the confidence of parents and teachers, and it has taken the university years to recover. But just as it has successfully broken through these barriers. It has suffered the body blow of having a quarter of its funding slashed by the University Grants Committee.

It is at this critical juncture that Sir Kenneth Alexander has taken over as principal. He has headed an extensive campaign against the cuts. "I'm sufficient of a democrat to believe the people making the decisions won't close their minds to the attitudes of the public and politicians of all parties," he says.

He has emerged from a meeting with the UGC "quietly confident" that some adjustments will be made to Stirling's budget. The UGC is expected to reply early in the New Year. But despite Sir Kenneth's optimism, the university has acted on the initial UGC proposals and there have been savage cuts in all non-pay expenditure. Even Sir Kenneth's

office seems barely heated. Stirling's cuts have been exacerbated by its two-semester academic year which meant it had about a month less than other universities to adjust to its straitened circumstances.

The staff have remained calm and united in the face of the cuts, says the principal, but he realizes there is considerable disquiet as they are very aware that posts are at risk. Being a young university, Stirling does not even have the loophole of early retirement as only four members of staff are approaching retirement age.

It's not only posts which are at risk, careers are at risk," says Sir Kenneth. "An academic career is highly specialized and leaves people without the flexibility of other professions that was one of the cases for tenure which is forgotten. You ask people to sink all of their intellectual capital in a narrow specialism, and it is unlikely they will find alternative employment, so they must have tenure."

The notion of perhaps putting these particular intellects and skills aside for ten or 15 years when they could be contributing to the future is at a human level tragic, and at a national level wasteful. And if people believe it's only going to happen in areas which are unrelated to our social and economic problems, they are mistaken.

Stirling's term system also means its student intake is a month earlier than other universities, and it has been forced to begin this session with cuts in student numbers, and unfilled places in its residences.

Sir Kenneth has always argued strongly for student demand to play a larger part in the allocation of university resources, a system which would guarantee a prosperous future



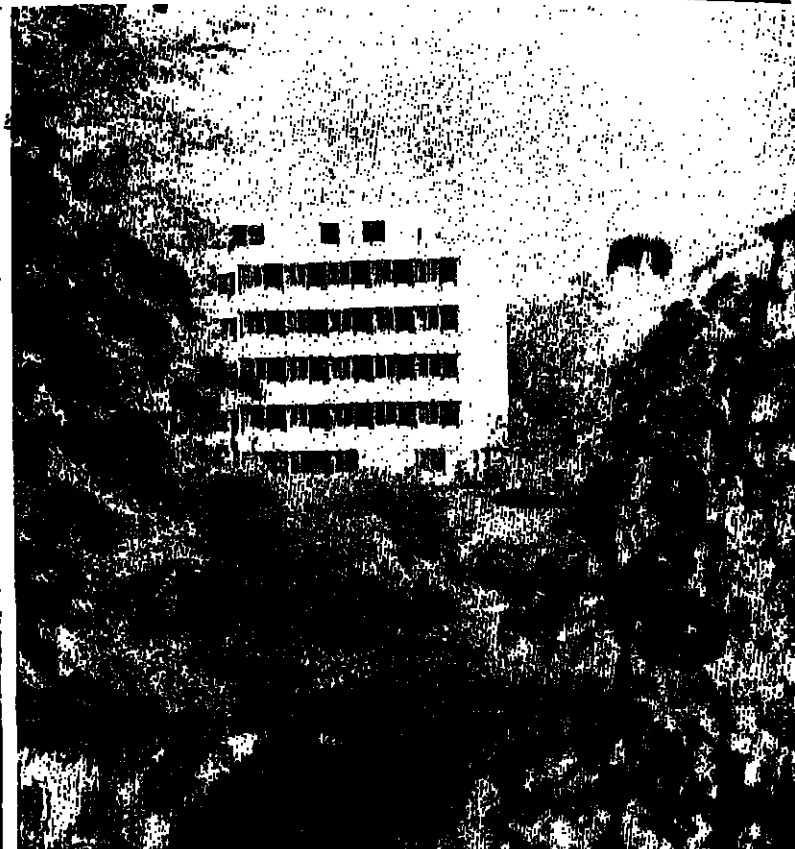
Sir Kenneth Alexander (top left) department of aquaculture attracts for Stirling. That it has now been deemed to have proved itself is shown by its remarkable rise in student applications of 68 per cent over the last five years compared with a national increase of less than 10 per cent. Indeed, the current session's increase is 14 per cent while the national figure is 9.

And that's not because we're seen as a soft touch," says the principal. "Our standards are the same as or higher than other Scottish universities."

But the UGC had told Stirling to drop its student numbers to 2,300 from its target of 3,000 which it has almost reached. While one in six prospective biology students applies to Stirling's highly regarded course, the UGC has recommended the department's reduction.

"A higher proportion of the future shape of our universities will come from committee decisions, and a smaller proportion from student choice," says Sir Kenneth.

He firmly believes in the Robbins principle, which is particularly appropriate since Lord Robbins was



is optimistic that Stirling can get its cutbacks reduced. Bottom left Stirling's first chancellor.

"I support the principle not only for intellectual reasons but for social reasons. Without that degree of equality of opportunity. There are social consequences which I consider deserve consideration as much as educational consequences."

Sir Kenneth himself, as well as being on the original steering committee for the Open University, chaired the committee which produced the Alexander report on adult education in 1975.

It recommended that the universities should take a community development approach in stimulating demand for adult education.

The principal points out that Stirling is already in the forefront of admitting mature students, with double the national average, and has a very strong continuing education programme. It now plans to take a major initiative in adult community education.

A system which ultimately has to be self-financing, particularly if we're going to pay attention to the problems of the unemployed. It's not only an enormous problem, but an enormous opportunity. Where people could actually enjoy using the time on their hand. But either the level of fee will have to be changed, or perhaps local authorities and the Manpower Services Commission will gradually come to see that this is a worthwhile way of spending some of the money being used nationally for retraining."

Stirling is not without outside resources, including sizeable grants from the research councils. Its economics department has won a large contract from the Treasury to examine possible changes in the tax system. It gains considerable outside income from its department of aquaculture and its recently established centre for Japanese studies, which runs among other things a series of seminars for industry and commerce on what Britain can learn from the Japanese, particularly in terms of the import export balance.

The difficulty is that the UGC is setting fee levels rather high, and it's

emerged from the highly intensive two-year course. Business studies and typing are taken along with every aspect of working with wood and right from the start the goal for the students is to earn an independent living. Since 26 graduates have established their own businesses and similar schools have been set up in the USA, Australia and Japan, the record seems to speak for itself. "Our students realize they are stepping outside the usual range of careers," says Makepeace. "They must be totally dedicated. The only way to work with wood is with total concentration. No art school is going to produce a worker with the sensitivity that wood needs."

"We can teach them to stand on their own feet by making them conversant with various disciplines because independence is largely a matter of integrating different skills. Of course it takes initiative and an in-

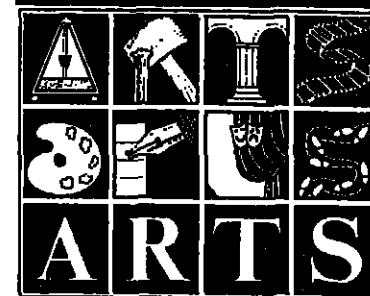
terested life - teaching and research - and that alternative policies would undermine this approach. Although it was stressed that the rejected policy was long term, the executive's suggestion that the research councils should transfer funds to the UGC so that universities could use the resources to create more tenured posts created an unholy alliance between delegates who wanted a permanent structure and waverers who but for their suspicion of the UGC might have supported the executive line.

This thorn in the AUT's side is beginning to be exploited by the Association of Scientific, Technical and Managerial Staffs. Last Spring ASTMS attacked the poor job security of researchers and commented: "A system designed in the nineteenth century is being allowed to obstruct progress in the twentieth."

It called for the abolition of short term contracts and the creation of a permanent structure with the consequent protection of employment legislation, holiday and sick leave, maternity benefits, and salaries on negotiated scales attached to the relevant academic scales.

It would be wrong to dismiss the AUT's efforts on behalf of existing staff. In the past year, under instructions from the December 1980 council, it has sought to set against waverer clauses and otherwise to improve researchers' conditions. The difficulty is dealing with university authorities and research councils against the backdrop of draconian cuts, real and expected. But over a period of time researchers will judge the union by its results.

As one speaker at Reading said how many researcher delegates will be at the next council to debate a long term policy?



"The only way to work with wood is with total concentration. No art school is going to produce a worker with the sensitivity wood needs." So says John Makepeace, whose school for Craftsmen in Wood SALLY FESTING discusses here. Also on the theme of craftsmanship, ALAN FRANKS describes a course in instrument-making offered at the London College of Furniture.

Now is a time for carving

You wouldn't perhaps expect a furniture craftsman to buy and sell property with such financial acumen that he acquires an Elizabethan mansion while still in his 30s. Nor would you expect him to secure his reputation through an educational venture, nor to launch a £350,000 appeal to develop the craft empire. But John Makepeace has done all of these things and he isn't likely to stop there.

His furniture is beguiling. The sturdy dining table in burr elm - a magnificent slab of wood on cylindrical legs, its polished surface rippling with labyrinthine grain contours - or the writing-table with a variety of inset drawers in iridescent sycamore: both show the perfection, the quality that is his hall mark, that gives the craft the distinction of an art form. But Makepeace has not only established a permanent niche for his work, but has also, in Edward Lucie-Smith's opinion, changed the whole course of our furniture-making tradition.

Makepeace decided in his teens to become a craftsman, and after an apprenticeship with a cabinet-maker (while qualifying as a teacher by correspondence) he was at 21 elected to the Society of Designer Craftsmen. Three years later he bought a derelict farm building near Banbury and gathered a group of craftsmen and apprentices around him. About this time he also met his first private patron and mentor, Clifford Barclay, whose encouragement stimulated expansion in the 70s. Recognition came quickly, then consulting for various firms and exhibiting all over the world. He exchanged the thriving barn complex for the large Tudor Parnham House near Beamstead, in Dorset. A trust was formed under distinguished patronage, and with help from private and public donations, the School for Craftsmen in Wood was launched as an educational charity in 1977.

Twenty-eight students have emerged from the highly intensive two-year course. Business studies and typing are taken along with every aspect of working with wood and right from the start the goal for the students is to earn an independent living. Since 26 graduates have established their own businesses and similar schools have been set up in the USA, Australia and Japan, the record seems to speak for itself. "Our students realize they are stepping outside the usual range of careers," says Makepeace. "They must be totally dedicated. The only way to work with wood is with total concentration. No art school is going to produce a worker with the sensitivity that wood needs."

"We can teach them to stand on their own feet by making them conversant with various disciplines because independence is largely a matter of integrating different skills. Of course it takes initiative and an in-



A student at his bench at the John Makepeace School for Craftsmen in Wood.

ventive mind, but we only take bright people." He emphasizes that all-round development is a responsibility the artist or craftsman owes to himself. "It came from a retiring pigeonhole; I would have been happy alone until I was told it wasn't possible for craftsmen to survive. Then I was inspired by people who showed me it could be done if you learned to organize. With the school and business side by side, students are training close to industry. This is reality, not isolated academia."

His detractors see his dynamism as lack of respect for traditional values (he believes that quality is in the object, not in the number of hours used to make it); more to the point, they see the school as an ego-building platform for rich men's sons. Certainly so far it has only been able to accept fee-paying students, but it has lost no time in establishing a scholarship, and it is currently searching for a suitably talented, suitably insolvent applicant to take it up. The next, more egalitarian, stage is to set up four specialized workshops in specific kinds of woodwork - musical instrument-making, wood carving, boat building and garden furniture making. Again, design and business will be integral parts of training, but this time trainees will be apprenticed to a master craftsman.

Finely finished, in luxurious materials, Parnham furniture is allied to the work of the great French Art Deco cabinet-makers of the 1920s, particularly Ruhlmann. It is, of course, expensive and the workshop depends for its survival on private clients; indeed creating markets is seen as a vital part of the business. Within the current obsession for antiques, Makepeace has found room for functional, innovative, one-off pieces.

"Craftsmen need to create fluency of expression in their materials," he says. "We mustn't accept the dictation of aesthetics which we have inherited from industrial methods. Industry needs predictable materials and designs - that is why the best designs in industry tend to be of plastic and metal. But craftsmen have an easy relationship with natural resources. We should be working more closely with raw material. As a profession we first see timber when it is cut into planks - almost like extended metal. We ought to be aware of the three-dimensional, solid material with its very strong individual characteristics."

"Craftsmen have the ability to celebrate the natural differences of wood."

Sally Festing

The Renaissance renaissance

If you had to name a vocation likely to survive the recession, the manufacturing of early instruments might not be the first on your lips. Haven't we all been led to believe that mass production from the likes of Yamaha have pushed British rivals from the market, that young people no longer make their own entertainment, and that even when they do, acoustic instruments are not their first choice?

These and other myths can be exploded by a visit to, of all places, the London College of Furniture, particularly at the end of February and early March, when there will be an exhibition of work by students in one of the more unusual departments in British higher education, that of Musical Instrument Technology.

Less than ten years ago the department had just eight students, concentrating on piano-tuning. Now there are nearly two hundred, each taking one of seven specialisms available on a four-year course. Apart from piano design/construction/tuning, and electronics for musical instruments, there are five options for study: the violin family, the harpsichord family, early woodwind, modern fretted and early fretted. For each of the fifty entrants every year, there are five times as many applicants.

The head of the department is Philip Shircliff, a man who seems himself to have found a perfect vocation for his disparate skills. He has been a clarinetist, a singer and a crafts teacher and is clearly happy to be at the confluence of music and manufacture. When it comes to the selection of students, he confesses that it is sometimes difficult to know exactly what the department is looking for. Perhaps the most important single thing is evidence of a strong desire to make a living from making instruments. There has to be that absolute dedication. A musical sense is not of such paramount importance, although students can have in-

struction if they wish."

One useful talent for the potential craftsman is a sound understanding of business, since for most of the department's graduates there will be few opportunities of working for a

regular employer, or of being a salaried staff member. Commissions, then, tend to be the source of income, and a maker may be as gifted as Amati yet still come badly unstocked if he is unable to handle his accounts properly.

In November instruments made by the students played a prominent role in Brunel University's "Sound of Music" festival, which illustrated the science and art of instrument-making past and present. Harpsichords, viols, lutes and recorders were among the pieces used by musicians at four of the illustrated lectures.

This does indeed appear to be a boom time for instruments of both the ancient and ultra-modern variety, and the department is right at the centre of things. Not only is there still a burgeoning of interest in the synthesizer, but there is also a sort of "renaissance renaissance." In Mr Shircliff's view the second of these phenomena can be explained largely by the influence of the early music specialist David Munroe, whose early death seems, fortunately, not to have braked the momentum. He compares the revival to that inspired by Arnold Dolmetsch at the turn of the century. Naturally, if more of the music is being played by more of the people, then more of the instruments (harpsichords, sackbuts, and so on) will be required. As Mr Shircliff explains, "when any professional, a musician as well as a sportsman, wants to outshine his competitor, what does he do? He looks towards his gear."

This department can reasonably claim to be unique in Europe and possibly in the world. Its novel achievement is to have "institutionalized" skills which have traditionally fallen into the province of the private apprentice. As to whether that second Amati is even now progressing through the London College of Furniture, Mr Shircliff's optimism is not of such paramount importance, although students can have in-

struction if they wish."

One useful talent for the potential craftsman is a sound understanding of business, since for most of the department's graduates there will be few opportunities of working for a

Alan Franks

Delius and Shakespeare

From March 8 to 14 the University of Keele is to hold a festival to celebrate the music of Frederick Delius, born 120 years ago in 1862.

The festival will include a varied programme of concerts given by a number of different orchestras, including the Royal Liverpool Philharmonic, conducted by the Delius specialist Norman Del Mer. Other events include lectures and lecture recitals, an exhibition of Delius memorabilia, and four performances by the university's drama society of Gunnar Heiberg's farcical play *Falkenødet* (Parliament), for which Delius wrote incidental music.

The artistic director of the festival is Philip Jones, who lectures in the university's music department.

Shakespeare is to be the subject of this year's public lecture series organized by the University of London Extra-Mural Studies department, in association with Birkbeck College. The lectures, which are held on Mondays at the London School of Hygiene and Tropical Medicine, are on many aspects of Shakespeare, including his treatment of the supernatural and the treatment of him by the cinema.

The first lecture is by Professor Katherine Worth on *Shakespeare on the Stage* on January 25. Other lectures include Barbara Hardy on "Shakespeare's Use of Narrative", Michael Slater on "Comedy in Shakespeare's History Plays", and Andrew Sanders on "Shakespeare and Death".

The fee for the course of eight lectures is £7.00. Inquiries should be addressed to Miss Winifred Bamforth, Special Courses Division, Department of Extra-Mural Studies, 26 Russell Square, London WC1B 5DQ.

Events

EXHIBITIONS: continuing
Until January 9. John Hansard Gallery, University of Southampton. Bill Brandt: photographs.

Until January 10. Museum of Modern Art, Oxford. Glen Baxter: paintings, watercolours and drawings 1970-1981. Beaverbrook's England 1940-1955: cartoons by Cummings, Low, Strube and Vicky; Winsor McCay: *Little Nemo in Slumberland* and other cartoons.

Until January 10. Side Gallery, Newcastle. China: an exhibition of photographs by Marc Riboud.

Until January 17. Victoria and Albert Museum, London. William Burgess: *Art-Architect 1827-81*.

Until January 24. Serpentine Gal-

lery, London. Craigie Aitchison: paintings 1953-81. Crucifixions, portraits and still lifes.

Until January 30. British Museum, London. *Medieval Limoges*: masterpieces of enamel from the Keir Collection.

Until February. Main Library, University of Edinburgh. Exhibition to mark sixtieth birthday of Oreadian writer George Mackay Brown.

Until February 6. Impressions Gallery of Photography, York. James Jaroch, *Press Picture Pioneer*, covering Jaroch's fifty years in Fleet Street.

Until February 21. Walker Art Gallery, Liverpool. Peter Moors: *Liverpool Project 6: Art into the 80s*. Work by 15 artists and photographers.

EXHIBITIONS: forthcoming
From January 11 until January 22.

The Gallery, Brighton Polytechnic. *Towards the Intelligent Eye*.

From January 12, until March 7. Adams Gallery, Fitzwilliam Museum, Cambridge. *The Art of Japan*: seventeenth to nineteenth centuries.

From January 13 to January 16. Gallery, Goldsmiths College, London. *Art and Design 81*: work by students who completed courses in 1981.

From January 14 to February 14. Museum and Art Gallery, Birmingham. *Harold Gillman*: touring Art Council exhibition.

From January 15 until February 28. Museum of Modern Art, Oxford. *Lubetkin and Tecton: Architecture and Social Commitment*.

From January 30 until February 28. Castle Museum, Nottingham. *Photographer as Printmaker*.

EVENTS
Tuesday January 12. Riverside Theatre, New University of Ulster. Max Jaffe (violin): *Music for your Pleasure*. With Jean Grayston (contralto) and Vincent Billington (piano).

Thursday January 14. Great Hall, University of Loughborough. Norbert Brainin (violin), Peter Schildhof (viola) and Martin Lovett (cello), members of the Amadeus Quartet, play Schubert, Beethoven and Mozart.

Tuesday January 19 to Friday January 22. British Museum, London. *Films about Japan: The Edo Stage and Coloured Nabeshima Ware*.

Wednesday January 20. The Art Workers' Guild, 6 Queen Square, London WC1. Lecture by Matthew Norgate on *Sir Gerald du Maurier, last of the actor managers*, orga-

nized by the Society for Theatre Research.

Thursday January 21. The Diamond, New University of Ulster. Julian Lloyd-Webber (cello), in a programme of Dvorak.

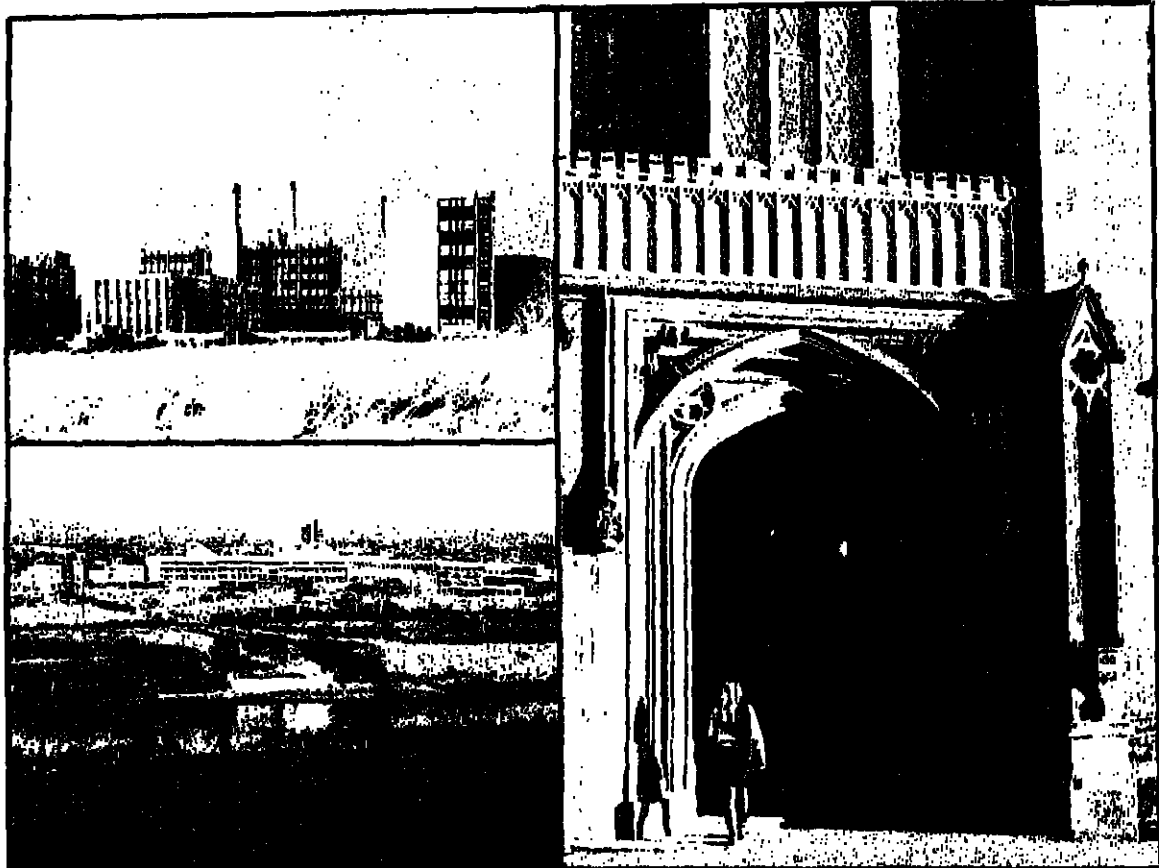
Thursday January 28. New Hall, City University, Letchworth. Alison Sangha performs Indian classical dance, accompanied by Mick Taylor (sitar) and Markanday Mishra (tabla).

Friday January 29. Great Hall, University of Exeter. Paul Tortelier (cello) and Maria de la Pau (piano) in a programme including sonatas by Brahms and Grieg.

Sunday January 30. Great Hall, Goldsmiths College, London. The Orchestra of the National Centre for Orchestral Studies, conducted by Vernon Handley, in a programme of Delius, Cochrane and Walton.

Handwritten note: "Up in the air" written vertically.

The point of no return



Ulster's centres of higher education: the Northern Ireland Polytechnic (top left) the New University at Coleraine and Queen's (right).

Arthur Williamson, Norma Reid, Robert Cormack and Robert Osborne discuss the characteristics of Ulster's students on the eve of the Chilver Report.

In 1973 39 per cent of Northern Ireland students who obtained degree course awards left Northern Ireland for their period of study. The majority of these are lost to the province; findings show that by 1980 66 per cent of those who left in 1973 to study in Great Britain had not returned.

These basic figures, and the motivations and characteristics of students and graduates which underlie them, provide the context for important decisions to be made shortly by the Government in response to the recommendations contained in the forthcoming final report of the Chilver Committee.

Here, these issues are examined in some detail, looking at the characteristics, opinions and attitudes of the students who left Northern Ireland compared with those who stayed, and contrasting their opinions and attitudes, both as students and, subsequently, as graduates. This first part concentrates on the group as students; then we will focus on the same people as graduates.

Of Northern Ireland students obtaining awards to go to university, who and how many leave Northern Ireland to go to Great Britain and the Irish Republic? Who and how many come back? What do the people who stay away think about the province? Why do so many stay away and under what circumstances would they consider returning? Do Catholic and Protestant students make the same sorts of decisions? Are there differences in the sorts of decisions made by men and women?

This study is of the group of Northern Ireland students who obtained grants for degree-level study in 1973 and 1979 and were in their first year of study. This article concentrates on those students entering in 1973, and where appropriate, reference is made to the 1979 findings where notable differences between the two years are apparent. Information about these students comes from two sources: the education and library boards who made the grant awards and the students themselves. More than 1,200 of the 1973 group responded to a postal questionnaire sent to them in 1980. Although each year's group of students is different in a number of respects, we are confident that many of our findings reflect trends which have persisted throughout the seventies; findings which have major implications for the planning of higher education, and indeed for the availability of graduate manpower in Northern Ireland well into the twenty-first century.

While the student flow from Northern Ireland is largely to Great Britain there is also a sizeable group who go to the Republic of Ireland. Of our respondents 33 per cent went to Great Britain for study while a further six per cent went south. Thus four out of ten Northern Ireland students left the province in 1973. The indications are that the troubles are not as important a factor in the choice as is often assumed but that a more general sense of dissatisfaction with life in Northern Ireland encouraged people to leave. This subject will be discussed later in this article. The outflow from the province decreased slightly after 1973 and by 1979 we found 30 per cent going to Great Britain and five per cent to the Republic. This phenomenon of student loss from Northern Ireland is even more striking when compared to Scotland with its eight universities. The statistics for Scotland reveal that in 1973 84.3 per cent of Scottish students went to universities in Scotland, (1979: 92.8 per cent), compared with Northern Ireland, (1973: 61 per cent; 1979: 65 per cent) going to institutions here.

For the 1973 group as a whole 60 per cent were male. The group who studied in Great Britain reflect this pattern with a 60-40 male-female breakdown. For those who studied in the Republic the reverse ratio holds true. This same pattern was found for the 1979 group but, reflecting an increased proportion of women entrants by 1979, the balance was then 55 per cent men and 45 per cent women.

Protestant and Roman Catholic students had different patterns of choice in where they went to study. Protestant students were more likely than Catholics to study in Great Britain, but the reverse was true for the Irish Republic where two Catholic students went for every one Protestant student from Northern Ireland. The same overall pattern was observed for 1979 although the proportion of Protestants going to the Republic had increased.

The group of 1973 entrants was predominantly from social classes I and II, accounting for 66 per cent of the total. Despite the various policy attempts to widen the social class base of participation in higher education (e.g. the 1947 Education Act and the Robbins/Lockwood reports in the 1960s) students from social classes I and II still maintained a markedly disproportionate share of places, though it should be noted that the proportion of working-class students obtaining grant awards in Northern Ireland was slightly higher than in Great Britain. Indeed we have found that students who left Northern Ireland to study were even more disproportionately drawn from social classes I and II with 74 per cent of those going to Great Britain, and 77 per cent of those going to the Republic, drawn from these classes. The same pattern was observed for 1979 entrants but it was noticeable that the proportion of students coming from social classes I and II had lessened somewhat.

In the context of the characteristics of students leaving the province the differences in A level attainment are also interesting. Of those students with the best A level results, that is three grade As or better, (obtained by 12.4 per cent of the whole group) more than half went to universities in Great Britain. By 1979 there was evidence of a marginal change in this trend with only 43 per cent of this best qualified group remaining in Ireland, north and south. On average, both the group who studied in Great Britain and those who studied in the Republic had slightly better A levels than those who went to the home institutions. For this was also true of the group who entered in 1979. At the other end of the scale, however, in both years Northern Ireland institutions admitted 75 per cent of the lower scoring group of students.

In summary, then, a clear pattern emerges from study of the characteristics of entrants. In both years, those who left Northern Ireland were, on average, from a higher social class background and had higher A level achievement than those who stayed. Demonstrably, then, we have a sizable brain drain in terms of the numbers of students being lost to Northern Ireland; moreover, we have been losing a considerable proportion of our brightest students, a loss which must have had a cumulative effect on the vitality - if not the viability - of the Northern Ireland institutions.

We now turn to the motivations underlying these patterns. In our survey students were asked: "Why did you enter higher education?" and in response we found three reasons were of prime importance. These were: the belief that a degree would help in getting a job (accounting for 19 per cent of responses); the desire to enter a profession (18 per cent); and "wanted to study a particular subject" (27.5 per cent). Thus students were either job-orientated or subject-orientated in their decision to enter higher education. The same priorities were expressed by the 1979 group. A considerable difference in the responses of men and women emerged in answer to this question: women were considerably more subject-orientated and less job-orientated than men. (A fuller discussion of this can be found in a report on *Women in Higher Education*, produced in connection with this research and recently published by the Equal Opportunities Commission.)

We also asked: "Why did you go to the institution of higher education which you attended?" In reply 43 per cent of respondents said that they chose their university or polytechnic because of the type of course offered; a further 22 per cent chose on the basis of the academic reputation of the particular institution. Possibly most surprising was that 15 per cent of our respondents chose primarily because of the proximity to home of their institution. Of this group, 87 per cent attended Queen's University, Belfast. In contrast, students at the New University of Ulster and the Ulster Polytechnic did not regard proximity to home as being at all important. Given the importance of student flows within Northern Ireland this particular factor warrants close attention by researchers and policy makers.

Finally, we asked: "What influenced your choice of course?" The three main responses were: "Best subject at A level", followed by "qualification for a job", and "essential for entry into a profession". Again we found that girls were much more likely to choose their course on the basis of their best A level subject while boys were more career and job orientated. As one would expect, given the concentration of professional courses at Queen's and Trinity College, Dublin, students attending those institutions were more likely to enter a profession than were students attending other institutions.

The group studied by this research investigation were people who entered higher education in 1973. More than 1,200 responded to a postal questionnaire sent to them in 1980. Although each group of graduates had special characteristics and circumstances and we do not suggest that our research necessarily provides a profile of what happens now, or what always happens, we are confident that many of our findings reveal trends which have persisted throughout the 1970s and have important implications for the planning of higher education and for the functioning of the Northern Ireland labour market in the 1980s and 1990s.

Speaking recently in the House of Commons, Mr Rhodes James, who has special expertise in the field of higher education, drew attention to the large flow of undergraduates out of Northern Ireland and said that the investment of resources in higher education here and the maintenance and expansion of the New University of Ulster at Coleraine would be money well invested.

graduates living in the Republic may be potential recruits for Northern Ireland employers.

It is likely that marriage constitutes the main reason why more women than men do not return to Ulster. There is evidence to suggest that men's decisions are most influenced by career priorities and women's by personal and family considerations.

We now turn to consider achievement levels of graduates, comparing the classes of degrees obtained by students in different areas. Although this exercise is made a little problematic by the fact that at Queen's a high proportion of students obtain pass degrees in contrast to arrangements at the majority of other universities, we observe that students who went to universities in Great Britain and the Irish Republic obtained a higher proportion of first class and upper second degrees than those remaining in Ulster. Men going to study in Great Britain obtained marginally higher average degrees than women.

We find that there is a clear tendency for the most successful students to remain living outside Northern Ireland. (Twenty-four per cent of graduates living in Northern Ireland in 1980 were high achievers compared with 35 per cent of those living in Great Britain and 39 per cent of those in the Irish Republic.)

Until now virtually no information has been available about the attitudes and motivations of young Ulster graduates living in Great Britain and in the Republic. How do they view life and career opportunities in Northern Ireland? Under what circumstances would they return to Northern Ireland and in what part would they be willing to settle? Do men's views differ from women's and, if so, how? We invited our respondents to answer a range of key questions about their attitudes. Graduates now living in Northern Ireland were asked whether they had ever considered leaving and, if so why. The most frequent reason given was to "broaden my horizons", closely followed by factors relating to the scarcity of employment here. The group who had had their higher education outside Northern Ireland were much more concerned about the need for cultural breadth than those educated in Northern Ireland. Women expressed a keener awareness of this need than men and women gave more weight to personal and domestic priorities than did men when it came to deciding where to live.

Graduates living outside Northern Ireland in 1980 also answered a range of similar questions and were questioned about why they left and in particular under what circumstances they would be willing to return. The most frequent reason given for leaving to study outside Northern Ireland at undergraduate level was to "broaden my horizons" followed by "attraction of a particular course" and "attraction of a particular institution". Women were much more inclined than men to choose on the basis of their strongest academic subjects. We also wanted to explore whether the troubles were an important factor leading young people to study outside Northern Ireland but our findings indicate that this is not as significant as might have been suspected. A higher proportion of respondents said that their main reason for leaving to study outside Northern Ireland was general dissatisfaction with the province. Although only one in the said that they left in the first place because of the troubles, this factor, taken together with the more general feeling of dissatisfaction with life in Northern Ireland, accounted for the main reason for leaving of one student in four.

We now consider the circumstances under which graduates living outside Northern Ireland in 1980 said they would return to Northern Ireland. We posed a number of hypothetical questions in response to which 67 per cent said they would not come back if they could obtain a similar job in Ulster and 35 per cent said that they would not return even if they could obtain a substantially better job here. Questioned about the prospect of the troubles on their attitudes, 43 per cent said that they would not come back even if the troubles were to end. However, when asked about what their atti-

Point of no return

tudes might be on becoming unemployed, 59 per cent said that they would return to Northern Ireland if they were to lose their job. In each of these cases women, and particularly married women, showed a greater reluctance to return than men.

In summary then there appears to be a very great unwillingness on the part of Northern Ireland graduates living in Great Britain to return to the province.

A further series of questions concerned perceptions of different areas of Northern Ireland by graduates living outside Northern Ireland. We found that most graduates were extremely negative about the province, as might be expected from their responses to the questions considered above. We found, however, interesting differences depending on where the individual had studied. For example, people who had studied in Great Britain were twice as negative about working in Belfast as those who had studied in the Irish Republic graduates who had been educated there also displayed a further set of contrasting responses: they would have been more prepared to work in Londonderry City than any other group, including those who had studied in Northern Ireland. On the other hand, the responses were twice as negative about living in counties Antrim and Down, though they much more preferred to work in border areas. These attitudes to different areas of the province were mirrored by the 1979 group.



Sir Henry Chilver: report awaited

This article presents some rather gloomy findings revealed by one aspect of this research project. Not only are we losing considerable numbers of well qualified young men and women: having decided to study outside Northern Ireland, they are most reluctant to return. As against this, of course, there is a trickle of unknown, but probably small, proportions of people who do move to Northern Ireland from Great Britain to take up employment here. They are mainly people in mid-career, often coming because of promotion. It is impossible to measure this flow or to balance its effects against the losses of graduates. However, it is clear that the exodus from the province of well qualified young men and women will have a cumulative and undesirable effect on many aspects of economic, cultural and social life in Northern Ireland.

The debate on policy concerning higher education in Northern Ireland must take place in a much wider context than hitherto. As government continues to spend many millions each year supporting and promoting industry and commerce in Northern Ireland, it is clearly imperative as never before that the institutions of higher education here be greatly strengthened. By contrast, current arbitrary and inequitable Government policy on higher education promises to make it possible for them to attract a greater proportion of the province's best undergraduates.

Arthur Williamson is lecturer in social administration at the New University of Ulster, Norma Reid is research fellow in mathematics at the New University of Ulster, Robert Osborne is lecturer in social policy at Ulster Polytechnic, and Robert Cormack is lecturer in sociology at Queen's University, Belfast. This study was partly financed by the SSRC.

Problem-solving can cause problems

David Chambers discusses the SSRC's switch to policy area committees

Early comment on the Social Science Research Council's regrouping to form new Policy Area Committees has focussed on very large questions. Does the new order undermine the basic disciplines? Does it depress "still further" the status of the social sciences? Will the SSRC take the role of surrogate customer for neglected research, while Whitehall calls the tune?

One way of trying to answer these questions is to look at some of the existing problem-based activities within the SSRC. How have they fared, and what distinctive difficulties have they met? SSRC already supports plenty of problem-based work, and in fact one of its existing committees, Management and Industrial Relations (MIRC) collected evidence two years ago on the issues raised by this kind of research in its own field. MIRC is not typical of SSRC committees, but its main findings do have wider relevance. We were able to identify a body of work whose relation to national needs is beyond doubt, but which would certainly have passed Rothschild's test: "the customer says what he wants; the contractor does it (if he can); and the customer pays". Our examples showed that working on problem-based research does not have to mean falling into step with Rothschild, and it seems a fair inference that forming Policy Area Committees need not amount to "Rothschildisation".

Shortly after the SSRC's birth in 1965, MIRC was set up as one of a couple of supposedly problem-based committees which Michael Young described as "counter-committees... which would be concerned with fields of application rather than with disciplines". Our review of 1979 was carried out by a group of academics, managers and trade union researchers, and we found that the notion of problem-based committee had been much qualified over time. There were striking cases however where MIRC had had to extend its set of criteria, painfully and hesitantly, beyond those which might have been used in a discipline committee. Focussing on problems had to that extent meant breaking new ground.

In this field, to call a piece of research problem-based is only the beginning of the story; there are lots of ways of being problem-based. But research in this field is nothing if not applied. Rothschild's schema ought to work here if it works anywhere. We therefore used Rothschild as the point of departure, looking at the straightforward cases where the person whose problem it is also pays for the research.

Reviewing this group of pure Rothschild projects we met difficulties which match those reported by other people.

In one group of these projects, the "customer" certainly had a researchable problem; but the problem tended to outlive the customer. This was partly because the usual customer was a group or department with shifting membership rather than a single person, and partly because there can be different glosses on any precise statement of what a customer wants. Lind Klein found many cases of this kind in her studies in Esso. Defining the problem was often a major issue; some of the solutions needed time to take root; research sponsors had a disconcerting habit of moving off to other jobs in the company.

In a second group the practitioners had restricted their research collaborators to the role of useful technicians. Many of these examples came from work for government departments where often the external researcher had been let loose only among the footholds of a problem, as someone skilled in gathering data. In Peter Brannan's words, "demand for the social scientist qua scientist, that is someone who is a repository of theoretically-based knowledge as well as of methods, (was) less strong".

A third group covered projects whose clients or sponsors had had a stake in the outcome of the research. Studies of organization figured strongly in this group. The problem might be a good one, but with a sponsor not wholly committed to the simple pursuit of truth, so even in these relatively straightforward cases, researchers had learned to cope with difficulties which Rothschild offers no guidance: how to maintain direction in the face of the disappearing customer, how to resist type-casting, how to judge the potential customer's good faith or indeed whether he is the appropriate customer for the particular research.

We turned next to cases of problem-based research in MIRC's field which fell outside Rothschild's scheme, i.e. to cases where there had been a substantial problem but no customer in this field, some problems with wide-ranging implications happen to sit on the plates of people, or groups, who have no wish at all to commission the research.

The topic of "work organization" is a case in point. Academic researchers and journalists have been keenly interested in a group of related initiatives: evaluating the Swedish experiments with semi-autonomous work groups and the W. German programme on "Humanization of Work", assessing work organization in relation to technology and internal labour markets. This research in which trade unions might be expected to take a close interest. In fact they have tended to be non-committal.

Roy Moore has offered an explanation which highlights a real difficulty for applied research in this field: "the trade unions' main experience of work organization - and indeed work re-organization - is strictly on the receiving end; the subject remains firmly planted in the province of the managerial prerogative, protected by a closed system of management thinking, policy formulation and decision-making". Some third party is evidently needed for this kind of research to get off the ground.

by UGC-financed academics on the allocation of their own time. But strategic science vanishes without trace.

MIRC's "awkward cases" fall squarely in Dainton's category of strategic science. They also serve as a reminder that sponsoring strategic science is not an easy ride. The sponsor is more exposed and his decisions more controversial than those of a customer for tactical or a patron for basic research. He needs to consult and inform external reference groups and organizations with potential interest in the work, some with divergent values and conflicting interests. The standards he uses will also be problematic. Besides applying well-established criteria, he needs sometimes to define standards over new contexts and settings, with further call for consultation and external debate.

Which is the exacting mission to which the SSRC itself now seems to be committed. This a far cry from acting as surrogate customer on behalf of central government; the map of influences is much more complicated than that. As one among many actors, the SSRC (like SERC, NERC, MRC) is perhaps best described as a slightly non-autonomous research council; mnemonically not-a quango but a snark. May all the connotations be propitious: exploration, dialogue, surprise!

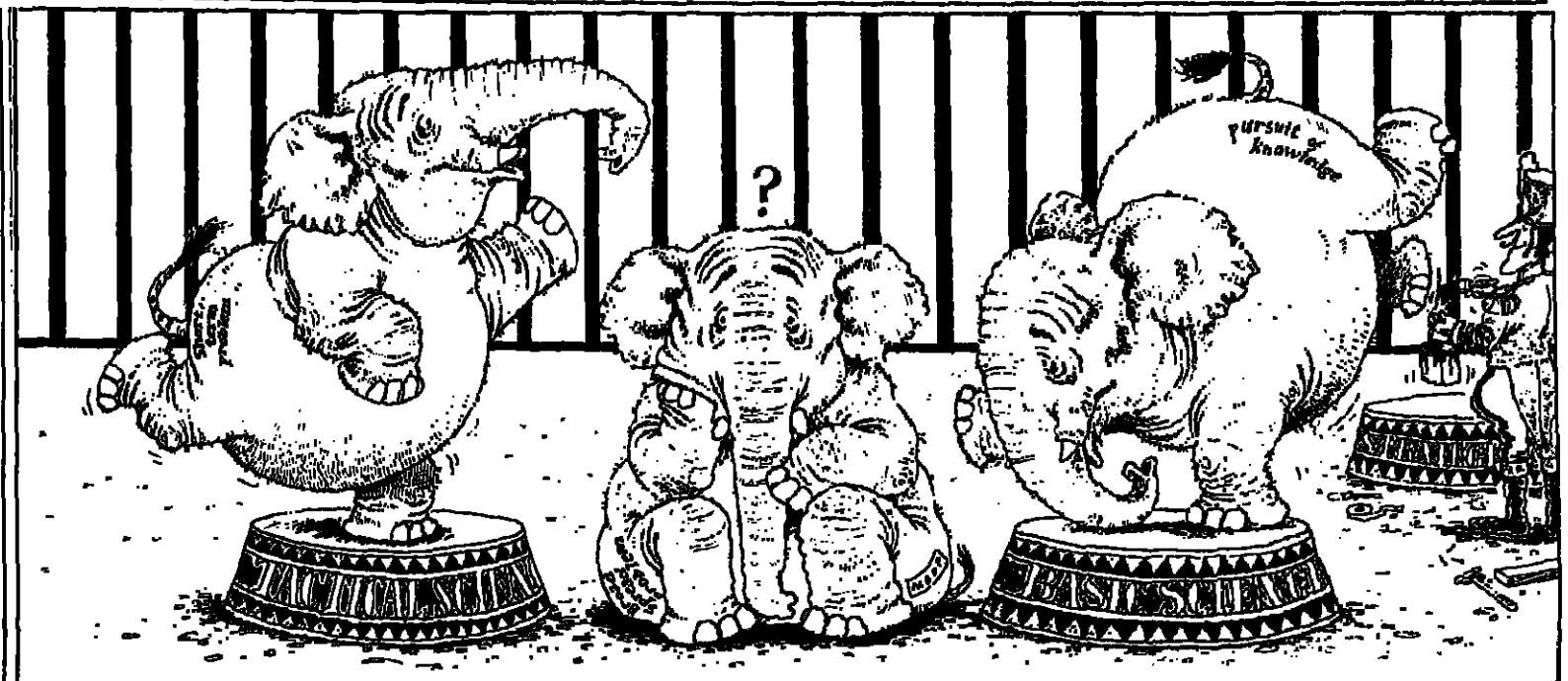
Two confident predictions can be made on the basis of MIRC's review of its own field. First, the consultations attendant on promoting problem-based strategic research are extraordinarily time-consuming. The SSRC's re-orientation will lead to make heavier demands on its secretariat: no scope for economizing there. Second, it is in the nature of the new problematic that it sets up collisions and brings conflicting value systems into the open: there is the prospect of spectacular conflicts to come. Linked with these predictions there is one critical question to ask of any new Policy Area Committee: not "are you going to undermine the basic disciplines" but simply, "what fresh ideas do you now have, for managing the sponsorship of problem-based strategic science?"

Ten years ago, swimming against the Rothschild tide, Dainton pre-empted his report with what was either a message in code or a very good joke. It is a quotation from the preamble to the 1662 Book of Common Prayer; perhaps it will become a text for all those who reform research councils. "And having thus endeavoured to discharge our duties in this weighty affair... although we know it impossible (in such variety of apprehensions, humours and interests - as are in the world) to please all; nor can expect that men of fœtidious, peevish and perverse spirits should be satisfied with anything that can be done in this kind by any other than themselves: Yet we have good hope, that what we have presented... will also be well accepted and approved by all sober, peaceable and truly conscientious... sons."

Dainton divides scientific work into three categories: (1) "tactical science", intended to serve the needs of "immediate execution or commercial functions"; (2) "strategic science"; (3) "basic science", necessary to enhance the advance of scientific knowledge, and the maintenance of a corps of able scientists.

"Strategic science" denotes the "broad spread of more general scientific effort which is needed as a foundation for... tactical science. It is no less relevant in terms of the practical objectives of the sort we have mentioned, but more wide-ranging. For this 'strategic' work to be successful it is necessary to maintain the vigour of the underlying scientific disciplines and to deploy these disciplines with due regard to national goals". Rothschild, employing two categories not three, did not seriously challenge the mode of support for basic science: partly through decisions of grant-making bodies, partly through choices made

The author is professor of operational research at the London Business School. He is chairman of SSRC's Management and Industrial Relations Committee, and this is written as a personal view.



BOOKS

Cryptic legacy

Walter Benjamin or Towards a Revolutionary Criticism by Terry Eagleton
New Left Books, £8.00 and £3.25
ISBN 0 8691 036 9 and 733 9



The photograph of Walter Benjamin on the cover of Terry Eagleton's book is one of Weimar's sacred artefacts. Like the Bauhaus chair or the legs of Dietrich, that sovietic mask seems to embody the spirit of the somnambulist Republic. It is the eyes which fascinate, as they hypnotize themselves. The Jewish boy who petrified himself with horrors from *Der Knaben Wunderhorn* grew up to be an oracle of the apocalypse; and the critic who diagnosed the sickness of a civilization in the countenance of Proust bequeathed his own haunted features to be the death-mask of his age.

Aeschete, bibliophile, flaneur, Benjamin personified the bourgeoisie whose doom he predicted. It is easy to see why Eagleton, fellow of Wadham College, Oxford, by his own account, a "major Marxist aesthete of the century", should revere this myopic Janus, whose utterances form such a cryptic legacy for socialism. He has dedicated his own work to "the emancipation of the masses". Yet a Benjaminesque self-consciousness belies his slogan. He knows that the books he writes within the academy inscribe the ironies of their production, and that "Universities are sites of contradiction: the conditions ruling them to produce those which allow them to produce a socialist critique". It is the "Oedipal tangle", the castrating plight of every radical intellectual; and it was an acute predicament for Benjamin, the communist critic who created himself out of Kant and the Kabbalah.

What infuriates Eagleton is that the establishment which rejected Benjamin in life should appropriate his work, on Baudelaire, Brecht or the Baroque, until it has become possible to imagine him today as "a distinguished professor emeritus". The problem for Marxists has always been how to square Benjamin's aestheticism with his later materialist aesthetic. Eagleton faces this by reading the materialism back into the early thesis on German tragedy: for Benjamin, Baroque allegory enacts a liberation of language from logic, and the excessive literariness of the *Trauerspiel* is nothing less than a striving for a lost Edenic materiality of word and body. So where Eliot and Lewis betray their ideology in a phonocentric disgust for the Miltonic "lecture", Benjamin discovers in its very absurdity a paradigm for his own Marxist aestheticism. On the same page we read, "There is no liberating object from their bourgeois meaning; Benjamin's linguistic materialism, his fustian belief in the word as creative act, made him, by this reading, a dialectical materialist long before 1924, when he fell in love with Bolshevik actress and found conversion on Capri."

Eagleton's gloss on Benjamin's *Trauerspiel* book is intended to rescue him from posthumous promotion to the Wartburg Institute, and it is a tribute to George Steiner, who in the New Left edition "pudriciously" opined that "Benjamin would be a prophet of any New Left. He knew that human intelligence resides in the keeping of the very form. On the contrary, Eagleton shows that man-

larship led Benjamin to socialism. It was the Kabbalah which inspired his dream of a messianic age when sign and referent would be collectivized, as they still are in the gestural language of Naples. In short, Benjamin locates the crucial metaphysical reality not in the celebration of "the very few", but like Eagleton, in the collective revolutionary consciousness, (a "babble of impulses below meaning"); and this book is severe on any distraction, such as feminism, from that "world groaning in agony". The Marxist critic is one who re-creates a fallen world by "transvaluing" its objects into the "material fullness" or which is revolution. Benjamin saw the "bricolage" of his own criticism as just such a transfiguration, and here he is celebrated as a poet of the contingent, the perfect paricide, and the man who murdered meaning to unite truth from intention.

Benjamin shared the German Jewish sensation of the crisis of language; yet he clung to a Judic faith in the incarnate Word. His *Sprachmystik* of the "dialectical image" which is supposed to store the race-memory of primal godliness, is the reverse of the symbolic philosophy of Wittgenstein, Cassirer and Saussure. Even Adorno found this mysticism impenetrable. Benjamin never sufficiently explained what he meant by the "aura", and it cannot be coincidental that he developed the concept under the influence of hushish and Hermann Hesse.

If Eagleton emphasizes the Kabbalah to the exclusion of Benjamin's Surrealist association, it is because such occultism is timely for his own aesthetic. For his own Oedipal knot has been his inability to reconcile materialism with a dogma of literary value. It is an Althusserian conundrum which has involved him in quaint formulations, like the proposition that value is proven by "those Victorian mill-girls who rose before work to read Shakespeare together". Now however the search for a value theory is made frantic by deconstructionism. It is the nature of liberal culture to devour its children, and Eagleton has fallen on Benjamin's messianism with the panic of an *enfant terrible* about to be digested. With Derrida, "the death-drive of theory" demolishes value. At Columbia, Eagleton's graduates are told Marxism is already deconstructed. Only a doctrine as inaccessible as Benjamin's can save the "aura" of "the great tradition" and the mystical status of the proletarian as a value-durable reality." It is necessary to irradicate reality." Eagleton's aesthetic has always been religious; now, it seems, base and superstructure are to be justified by faith in transubstantiation.

"Mysticism of mysticism" is how Benjamin's friend, Brecht, described his "ghastly" messianism. The Torah teaches that the millennium will be indefinitely deferred, and Benjamin's *Noch Nicht* could not influence Marx's School. It contributed, none the less, to Weimar's apocalyptic yearning for the *Jahrestag* that moment of revolutionary redemption when the collective libido rises which he likens to carnival. He does not record that the pursuit of the millennium in Germany was inflamed by anti-Semitism, nor that the libidinous violence of carnival has always craved the scapegoat. When he re-creates Benjamin's Sorelian vision of the present as "the bull whose blood must fill the pit", he associates however with barbarism. The theme is chilling in his "beliefs-joke that there is something darkly comic about the fact that the bourgeoisie are their own grave-diggers". On the same page we read, "There is no liberating object from their bourgeois meaning; Benjamin's linguistic materialism, his fustian belief in the word as creative act, made him, by this reading, a dialectical materialist long before 1924, when he fell in love with Bolshevik actress and found conversion on Capri."

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Richard Wilson

Richard Wilson is lecturer in English at the University of Lancaster.

Perish the thought

Soviet Dissent in Historical Perspective by Marshall S. Shatz
Cambridge University Press, £12.50
ISBN 0 521 23172 8

Novy Mir: a case study in the politics of literature 1952-1958 by Edith Rogovin Frankel
Cambridge University Press, £19.50
ISBN 0 521 23438 7

Both of these books are concerned with the relationship between literature and politics in a Russian or Soviet context. Both tend to illustrate the axiom that politics are practically always bad for literature, that bad politics produce atrocious literature and that the worst politics have the consequence of abolishing literature altogether. Both are careful, scholarly examinations of the nature and the effects of this uneasy relationship which begins with the emergence of an independent literature in eighteenth-century Russia and has become an inseparable part of the history of Russian literature. Nowadays there is no doubt that a great part of what passes for dissidence in the Soviet Union has a literary connexion and owes its provenance to the traditions of anti-establishment feeling that were first formulated in the literature of the last century.

Soviet Dissent in Historical Perspective bases its treatment principally on literary and memoir sources. It offers a description of the genesis of the Russian intelligentsia in the eighteenth century by emphasizing the emancipation of the nobility after 1762 and the rise of the concept of individualism in the work of Novikov, Fonvizin and Radishchev. Although, as Professor Shatz points out, "the intelligentsia urged political and social change not just for its own benefit but the benefit of others", as it matured and grew in influence that desire for political and social change acquired habits of revolutionary dedication which turned the Russian intelligentsia into a rationalistic brotherhood ready to sacrifice individual happiness for the happiness of mankind as a whole. In the case, for instance, of Trotsky, this tended to turn a member of the intelligentsia into what is described as "a vessel of an objective, Marxist consciousness of the forces of social development". Too late, perhaps, the Russian intelligentsia recognized it had created out of itself a monster of revolutionism. The noble, poignant and, alas, belated attempt to reassess its ideals in the famous symposium *Signposts (Vekhi)* of 1909 has the appearance now of a scrupulously composed premature obituary notice. Within ten years the intelligentsia had virtually perished, but the signposts showing the path it should have followed have remained, despite Soviet attempts to bury them under five-year-plans concrete, eradicate them by purges or obliterate all memory of them by censorship and exile.

Soviet dissidence in its contemporary form really dates from Khrushchev's denunciation of Stalin, but it was in literature that the implications of Khrushchev's act showed themselves in a criticism of bureaucracy, administrative injustices and the denial of individual freedom. Professor Shatz points to "the great tradition of moral seeking in Russian literature, and it is this tradition which gave the inspired dissident expression in the case of Pasternak, Solzhenitsyn and Daniel, Brodsky and Solzhenitsyn, names only the most prominent in what is an extensive litany of names. The analysis of the present state of affairs among Soviet dissidents shows that, though they still give first priority to the autonomy of the individual, they are otherwise fragmented in their aims and to a great extent cut off from the mass support which might elevate their protests into nationwide issues. On the whole, non-proletarian Soviet dissidence is both a product of the state's desire to create an educated elite to ensure the state's welfare and a consequence of historical traditions of dis-

sent and protest that are as much that elite's heritage as they were the heritage of the pre-revolutionary intelligentsia. Professor Shatz argues a powerful, well-presented case for regarding Soviet dissent in a historical perspective, concluding with the persuasive, though hardly consoling thought that "as they have been ever since the reign of Catherine the Great, the Russian state and Russia's dissidents are locked in a troubled but inextricable relationship."

Dr Frankel's study of the Soviet journal *Novy Mir* during the 1950s amply illustrates the main points of Professor Shatz's thesis while reading a little too obviously like a thesis in its own right. It is a detailed, scholarly survey of the successive advances and retreats of liberalizing tendency in the editorial policies of the journal. As a study it has nothing to do with literature as such. The novels, poems and other literary works which appeared in the journal are treated principally as barometer readings in determining the liberalizing, or contrary, movements of the political temperature. Dr Frankel is able to show by this means that the picture of the relationship between politics and literature in the 1950s was never black and white but full of varied and subtly graded hues.

At the centre of the picture is the figure of Tvardovsky. Though Konstantin Simonov edited *Novy Mir* between 1954 and 1958, this study is really about Aleksandr Tvardovsky. It was under his editorship that the journal first achieved its liberal reputation in the post-Stalin period and required that reputation after 1958

when Tvardovsky was reappointed. Of particular interest are Dr Frankel's two final chapters. The first tells us about the way in which *Novy Mir* was run, the editorial hierarchy and the pattern of literary control and influences operating on the journal from the party and the government apparatus. It provides a most valuable insight into the practical workings of Soviet journalism. The last chapter crowns the study with a sympathetically revealing portrait of Tvardovsky himself. Though Solzhenitsyn has emphasized in his memoirs that Tvardovsky probably did not do enough to combat outside pressures, here he emerges as a kindly, tolerant, sensitive man who did his duty as he saw it towards his generation and the literary needs of his people. He has had his detractors, but his editorial achievement was far from negligible. For, as Dr Frankel writes, referring to the journal's readership, "to those who did have the thrill of reading a Tsvetaeva poem, a story of Solzhenitsyn, a review by Shcheglov, literary criticism by Sinavsky, work by Lifshitz, Grossman or Pomerantsev, could there have been any doubt? The answer is emphatically no. Tvardovsky made *Novy Mir* interesting to read; that is sufficient testimony to his achievement."

Richard Freeborn is professor of Russian literature at the School of Slavonic and East European Studies, University of London.

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Quixote on wheels

Don Quixote by Miguel de Cervantes translated and edited by Joseph R. Jones and Kenneth Douglas Norton, £5.50
ISBN 0 393 09118 3

Don Quixote is a highly literary work in more than the ordinary sense, for as a parody of the books of chivalry it reflects that tradition and, in the process of deflating it, advances in its place the theory and practice of a new kind of literature.

Such concerns are often, of course, at the heart of the book's success, and in particular of its humour, for in the juxtaposition of contrasting techniques and styles - chivalresque, pastoral, romance, picaresque - Cervantes exploits a rich vein of laughter. But matters that preoccupy Cervantes were familiar to Quixote and his age must for other ages and other sensibilities be not merely less important but, as objects of satire and agents of laughter, correspondingly less effective. These are problems which are likely to affect our reading of the work in Spanish. How much more, then, will they be of relevance to a translation into English, given that translation from one language to another is at best a compromise.

This new translation, begun by Professor Kenneth Douglas and after his death completed by Professor Joseph R. Jones, exemplifies the difficulties. It had been Douglas's aim to revise and bring up to date for American readers the translation of *Don Quixote* completed by John Ormsby in 1885 and reprinted some twenty times. Ormsby, a keen student of Spanish literature, a keen student of Cervantes, a keen student of Cervantes' principle: a concern for accuracy and the preservation of the work's unique flavour, and he had too the advantage of a Victorian readership steeped in the English literary language of the past. In consequence, Ormsby was afraid neither to preserve Cervantes' long and often medieval nature of his language, nor to substitute obscure Spanish words with appropriate Elizabethan equivalents.

Professor Jones, in contrast, has in mind a readership of very different tastes and habits - an American student readership which will, by his own admission, look for speed of comprehension and pace. In the interests of "pace" he has been obliged

to reduce the length and simplify the complexity of many of Ormsby's sentences and, for the sake of "comprehension", to modernize numerous words and many of the Spanish proverbs in which Cervantes's book abounds. To what extent do such compromises allow Professor Jones to achieve the objective which Ormsby, availing himself of different methods, had also set himself - to preserve the flavour of the original as much as possible?

As a comparison with the Spanish text suggests that the concessions to "pace" and "comprehension" - alarming enough in their implications - are not as disastrous in reality, though this is largely because Professor Jones is often prudent enough to allow his practice to overrule his stated aims. In *Don Quixote*'s speech on the Golden Age, delivered to bewildered goatherds, prolixity as much as content is the instrument of parody and it is sensibly retained, in the windmill episode Cervantes's flowing style vividly evokes both the speed and the resolve of Quixote's charge, while Jones's shorter sentences fall to capture the same effect. In the last resort Ormsby's translation is as much a half-way house as Jones's, but a reading of the latter leads to the conclusion that, for all its merits, Jones's achievement is inevitably circumscribed by the requirements of a less literate readership.

The translation of the text together with all the original profuse material, is accompanied by a useful selection of extracts from the works which in varying degrees led to the composition of *Don Quixote* - the anonymous ballad farce which inspired the early chapters, the books of chivalry, and Aristotle's *Orlando Furioso*. The choice of Robert Southey's translations of *Amadis de Gaula* and *Palmerin de Inglaterra* was very appropriate, for their language aptly illustrates the features of those works which Cervantes chose to parody. But Professor Jones's stated preference for these older versions over more modern translations is almost Cervantes's - his own attempt to modernize Spain's greatest work of literature.

Finally, some of the principal critical issues posed by *Don Quixote* are reflected in 11 essays by acknowledged scholars which will be of great value to the student of Cervantes.

Gwynne Edwards

Gwynne Edwards is reader in Spanish at the University of Wales, Aberystwyth.

BOOKS

Saturn and back

Orbiting the Sun: planets and satellites of the solar system by Fred L. Whipple
Harvard University Press, £15.00
ISBN 0 674 64125 6

The New Solar System edited by J. Kelly Beatty, Brian O'Leary and Andrew Chalkin
Cambridge University Press/Sky Publishing Corporation, £9.95
ISBN 0 521 23881 1

Here are two quite different but complementary books introducing the general reader to the study of the planets and satellites of the solar system.

The first is an updated and enlarged edition of *Earth, Moon and Planets* first published in 1941, but so much has happened since the days before the so-called space age that one wonders why this new book, which addresses itself to the astonishing facts and insights expensively acquired by spacecraft technology, is presented as a new edition. Yet the continuity, not only of the author but of understanding in the scientific community, is there.

Science even more than society normally proceeds by evolution rather than revolution, but the past two decades have seen an almost Copernican revolution in the status of and attitudes to our study of the solar system. For the previous half century this was the hunting ground of amateurs, whose small aperture telescopes and patient waiting for good observations, were well adapted to the problems. As the preface to *The New Solar System* reminds us, Gerard Kuiper, who died in 1973 and who is widely recognized as the father of modern planetary science, once remarked that "the planning of the new techniques... will continue to depend heavily on ground-based observations."

With the advent of space rockets and the planetary study programmes of the superpowers, the highest degree of professionalism was essential - a quality that had long marked workers in the field like Fred Whipple and which marks the more youthful team of contributors to the second volume. Almost all of whom have played leading parts in NASA's programme. Their book opens with Noel Hinners's chapter on "The Golden age of solar system exploration", which hints, even in its title, that the party is over. Hinners, who was a very good Associate Administrator for Space Science at NASA for five years before leaving to become the director of the Smithsonian Air and Space Museum, knows more than most about the politics of carrying on an extremely costly space programme. In letting us into these secrets, his contribution is a significant document, particularly at this time of severe financial pressure on NASA, when the "shuttle" space transportation system is a vampire at the throat of basic space science.

The remaining 19 chapters each have a different author (two for chapter 16) from a list of "top people" in solar system physics. They do not always agree and they differ greatly in their success at using words "understood of the people". There is a certain charm in watching them get carried away by their enthusiasm for the subject, so that we find explanations for a professor of classics giving like way to unexplained concepts like Alfvén waves, collisionless shocks and even adiabaticity; and their objects even passive mod verbs are replaced by first-person pronouns in a manner reminiscent of St Luke's personal intrusion into his account of St Paul's missionary journey as they approached his home in Macedonia.

This aura of involvement expands to its apex with Bradford Smith's blow-by-blow account of surprise and ecstasy in the watching team as Voyager 1 approached Jupiter, caught a sideways glimpse of its tenuous ring, and having shattered many a mental image of Ganymede, Callisto and Io went on to encounter Saturn.

BOOKS

Mark, release, recapture

Estimating the Size of Animal Populations by J. G. Blower, L. M. Cook and J. A. Bishop
Allen & Unwin, £9.50 and £4.95
ISBN 0 04 591017 0 and 591018 9

Investigating Animal Abundance: capture-recapture for biologists by Michael Begon
Edward Arnold, £4.50
ISBN 0 7131 2741 4

Population size is one of the most fundamental quantities in population dynamics, yet paradoxically it is one of the most difficult to measure in wild populations of many animals. At a time when theoreticians are producing models with more and more complex dynamic properties, it seems that field ecology is barely able to produce data of sufficient quality concerning population size to answer questions posed 20 years ago. Not that I am suggesting that there are no valuable data coming out of field population studies; rather, they relate to factors affecting population change (fecundity and mortality of different stages) but not directly to population size. A parallel can be seen in population genetics where there are many data on components of fitness but rather fewer reliable estimates of Darwinian fitness.

A number of important papers concerning the theory of population estimation have appeared since the war, and statistical comparisons of the different methods can be found in Cormack's review (1969) and Seber's book (1973). Unfortunately, most ecologists have considerable difficulty digesting the mathematical subtleties of the different methods and therefore the appearance of two books written by ecologists for the use of other ecologists deserves a qualified welcome. Begon's book is restricted to mark-release-recapture estimation and has chapters on the models underlying different methods, interpretation of results, testing assumptions, and practicalities. Blower, Cook and Bishop have a short chapter on area sampling of immobile organisms, but most of their book is also about mark-release-recapture methods. Their chapter topics include basic principles (double and triple catch), details of the different methods, sampling with constant effort, estimation of error, and choosing a method.

Both books are lists of symbols used, but Blower, Cook and Bishop's glossary is a little daunting; for example the entry "releases - see captures". Of course, it is essential to establish a consistent notation for the different methods, and more realistic models require more symbols to be defined. Both books use their notations in a large number of algebraic expressions, the accuracy of which I have not checked, and both books can be criticized for minor but irritating inaccuracies of statistical statement; for example, Begon talks about asymmetric standard errors on a back-transformed scale, and Blower, Cook and Bishop define maximum likelihood estimation as maximization of a probability function.

On the whole, the respective authors do a reasonable job of interpreting the mathematical properties of different methods for ecologists with a reasonable grasp of statistics. Worked examples are liberally scattered throughout both books. Blower, Cook and Bishop make extensive use of computer simulations to compare the accuracies of different estimates in defined populations, but their often lengthy tables, figures and notes fragment rather than summarize the text.

Overall, I found Begon's book the more readable. Although both books require concentrated effort, much of what Blower, Cook and Bishop are saying is lost in too much detail. Begon puts up the limitations imposed by the biology of animals more clearly, and I also found his emphasis on the importance of testing the assumptions underlying different methods and his caveats regarding the lack of statistical significance more appealing. However, some of Blower, Cook and Bishop's detail on such topics as laying out a data trellis for ease of calculation will be very useful.

Both books provide valuable introductions to the literature and should be used as such, not as replacements for source references. No book will be able to provide a solution to the practical problems of unequal catchability or other ways in which animals violate the assumptions of the ecologist, and there is still no way that the field ecologist can avoid making such assumptions and running the risk of obtaining nonsense estimates of population size.

Robert H. Smith is lecturer in zoology at the University of Reading.

BOOKS

Applied enzymology

Understanding Enzymes by Trevor Palmer
Ellis Horwood/Wiley, £25.00 and £9.50
ISBN 0 85312 202 4 and 307 1

My initial reaction to this book was that yet another "general" or "introductory" enzymology text with emphasis on applied aspects could only mean that the book would be an extension of a polytechnic lecture course. After reading the book I must admit that, although my initial reaction may have been correct, I found a refreshing style and for the most part a well-balanced content.

Section one, on enzyme structure and function, discusses basic protein structure and methods for its investigation, the biosynthesis and general properties of enzymes, enzyme specificity and monomer-oligomer properties. As the approach requires little previous knowledge, the section serves as an adequate introduction. However, bearing in mind that the remainder of the book is written to a higher standard, it is a pity that enzyme structure and its contribution to the catalytic mechanism were not further developed here.

The second section, dealing with kinetic and chemical mechanisms, is the best part of the book, reaching a standard well beyond that required in an introductory text. After an introduction to bioenergetics, catalysis and kinetics, several well-written chapters on kinetic aspects provide clear accounts of single and multi-substrate kinetics, enzyme inhibition, active-site investigation and the chemical nature of catalysis. An excellent section on cofactors and their reactions is also included. Enzyme mechanisms and chemistry are not covered to any great extent, perhaps reflecting the lack of emphasis on enzyme structure in section one.

The latter part of the section covers ligand binding, sigmoidal kinetics, allostery and the significance of these phenomena to enzyme behaviour. All the chapters on kinetics do in fact provide clear and concise explanations, with definitions clearly expressed, and with, in many cases, equations being derived to illustrate appropriate concepts.

The final section considers methods for the investigation of the properties and relevance of enzymes in vivo, enzyme purification and the applications of enzymes. Other chapters cover the use of enzymes as analytical reagents and enzyme applications in medicine and industry. Many examples are given, in each case the underlying principles being clearly explained.

Many of the diagrams in this book can only be described as sketches, in most cases merely detracting from the generally high standard of presentation. In other instances it leads to a lack of clarity, as for Fig. 10.3 (rate of enzyme activity) or Fig. 12.3 (hill plots, or even mistakes, as for Fig. 12.4b (negative cooperativity)).

Robert H. Smith is lecturer in zoology at the University of Reading.



A seventeenth-century astronomer and his telescope. Taken from Louis Bell's *The Telescope*. First published in 1922, the book has been re-issued in a Dover edition with a new introduction by Professor Jay M. Pasachoff. Distributed in Britain by Constable, it is available in paperback only at £4.10.

Global viewing

Terrain Analysis and Remote Sensing edited by John R. G. Townshend
Allen & Unwin, £20.00 and £9.95
ISBN 0 04 551036 9 and 551037 7

Pictures of the world from space are becoming visual clichés. Yet many scientists know neither how nor why they are acquired.

The main picture gathering techniques are optical-mechanical and sense the "brightness" of radiation reflected or emitted by the Earth's surface, in the visible and invisible (infrared and radar) parts of the spectrum. These non-photographic techniques record data as numbers relating to the brightness of patches of the surface arranged in regular lines and rows. Not only can they be reconstituted as pictures but the data can be manipulated by computer to give a wide choice of contrasts, textures and colours, attained to a particular use, which in most cases means nice to look at.

The purpose of this remote sensing is to express surface variations on the broadest scale. The most prominent of satellites, which quite simply were launched to monitor regional agriculture, particularly in the Soviet Union. The spin-off, however, has had enormous potential for other disciplines, particularly geography, geology and ecology; and so to a lesser extent have the various meteorological satellites.

This book, compiled by geographers past and present at the University, concentrates on geomorphology, but has a broader appeal. Interpreting remotely-sensed pictures is very much an art once the picture

has been tuned to perfection. The first five chapters form a basis for disciplining the "geopose" lurking behind the interpreter by defining clearly, if a little formally, the terms of reference for the Earth's surface, the collection of data from afar, manipulating it by computer, matching it to that acquired at control sites on the ground, and integrating it at a range of scales in a sort of "zoom lens" approach to geomorphology.

Rather than attempt to give a comprehensive treatment of remote sensing applied to geomorphology, which would be possible only at the most elementary level, the authors have wisely chosen a case-study approach. The topics are governed by the research interests of the team of authors, and include features of Mediterranean, arid, semi-arid, and tropical terrains. Two chapters have more specific topics, dealing with analysis of gully erosion and the mapping of superficial sediments. I thought it rather a pity that the case-studies reflected more the research interests at Reading than the Earth's gross physiographic features. In particular, it would have been useful to deal with glaciated terrains and those of youthful mountain ranges both of which require significantly different interpretive techniques.

Bar its minor irritations in jargonistic style and geographically biased scope, the book is well produced, consistent in level and a useful prod towards a revolutionary technique for the many undergraduates who will undoubtedly read it.

S. A. Drury is lecturer in earth sciences at the Open University.

The History of Manned Spaceflight, by David Baker, has been published by New Cavendish Books at £19.50, intended as a complete record of manned spaceflight development, from Yuri Gagarin to the Space Shuttle, the book covers "all the great moments of failure, tension, drama, euphoria and success that characterized the beginning of man's adventure in space".

Remote Sensing in Meteorology, Oceanography and Hydrology, edited by A. P. Cracknell, has been published by Ellis Horwood/Wiley at £35. Based on a postgraduate summer school held at the University of Dundee, the book introduces a wide range of marine and atmospheric applications of data obtained from the ground, from aircraft, and from spacecraft by remote sensing.

